



# MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,  
Mining, Contracting, Engineering, Building, and General  
Business Interests of the South and Southwest

Vol. 71  
No. 20

ESTABLISHED 1882

\$4.00 Per Year  
Copy 15 Cents

## Immense Value of Cotton as a Food Crop

That the cotton crop of the South is already furnishing an enormous addition to the food supply of the country may, perchance, be surprising to many who have thought of cotton for its lint only. But that the cotton crop can be made a source of an enormous addition to the bread supply, taking the place to a very large extent of wheat flour, though known to experts, will surprise many even of the most enthusiastic advocates of cotton.

No crop has been more thoroughly misunderstood, and, indeed, misrepresented.

No product of the soil of such priceless value has received such scanty appreciation of its infinite importance in all the ramifications of human life as cotton and its products.

Some amazing facts are given in this issue as to the food value of cottonseed products, showing that even now cottonseed annually produces of food for man and animals a value of more than \$350,000,000.

This, however, is the merest hint of the almost limitless potentialities of the cotton crop as food in the shape of bread and oil, as feed for livestock superior to grain, and as the basis for the refertilization of the soil which unite to make the cottonseed, even if the lint were disregarded, of more value to the country than an equal tonnage of grain.

BALTIMORE, MAY 17, 1917

# Bethlehem Steel Company

General Office—South Bethlehem, Pennsylvania

Announces the purchase of the property and plants of the AMERICAN IRON AND STEEL MANUFACTURING CO., located at LEBANON AND READING, PA., which with the BOLT AND NUT DEPARTMENT at STEELTON gives a complete range of sizes and variety of bolts and nuts.

We solicit your inquiries and assure prompt attention to your orders, and ask you to communicate with our nearest BRANCH OFFICE.

We are prepared to furnish:

## BOLTS

Machine, Carriage, Lag, Plow, Patch and Track.

## NUTS

Hot Pressed, Cold Punched, Forged, Finished, Case Hardened and Castle.

## RIVETS

Boiler, Bridge, Structural, Ship, Tank and Tap.

## SPIKES

Standard R. R., Screw Track, Universal Screw, Boat, Dock and Wharf.

## BAR IRON

Refined, Chain, Double Refined, Engine Bolt, Staybolt and Special Staybolt.

## HEAT TREATED TRACK

Frog and Fitting-up Bolts in SIMPLE ALLOY and MAYARI Steels.

### BRANCH OFFICES:

Atlanta.....	Candler Building	Detroit.....	Penobscot Building
Boston.....	Oliver Building	New York.....	Trinity Building
Baltimore.....	Continental Building	Philadelphia.....	Morris Building
Cleveland.....	Guardian Building	Pittsburgh.....	First National Bank Building
Chicago.....	People's Gas Building	St. Louis.....	Boatmen's Bank Building
	San Francisco.....		Crocker Building

### WAREHOUSES:

South Bethlehem    Lebanon    Boston    Cleveland





## DIRECTORY

### ARCHITECTS

### ENGINEERS

### CONTRACTORS

Detailed classification of specialized work undertaken by those  
having cards in this Directory will be found in Classified Index.

#### THE S. R. SMYTHE COMPANY

*Engineers*

PITTSBURGH, PA.

*Contractors*

Steel Works, Rolling Mills, Blast Furnaces, Hot Blast Stoves, Furnaces for All  
Purposes. Operated with Producer Gas, Natural Gas Oil or Pulverized Coal.  
Coke Ovens. Gas Producers, Hand Operated or Mechanical.

*The Valve of the Era.*

SCHILD SLIDING GAS AND AIR REVERSING VALVES

#### HOWARD M. GASSMAN

Mem. Am. Soc. M. E.

*Consulting Engineer*

Mem. Am. Inst. E. E.

EQUIPPING MILLS AND MINES WITH POWER.  
REPORTS ON AND DESIGNING OF MANUFACTURING AND  
POWER PLANTS.

Brown-Marx Building.

BIRMINGHAM, ALABAMA.

#### ARTHUR G. McKEE & CO.

*Engineers and Contractors*

Power Plants, Industrial Buildings, Metallurgical Plants, Blast Furnaces.  
Storage Bins, Coal-Handling Equipment.

Design—Construction.

CLEVELAND, OHIO

#### HENRY J. COX AND COMPANY

Assoc. Mem. Am. Soc. C. E.

*Engineers and Contractors*

Railroads, Highways, Drainage and Levees.

ALEXANDRIA

LOUISIANA

JOHN W. MOORE

OTTO N. MOORE

#### MOORE BROTHERS

*Consulting Engineers*

Machine Design, Pumping Systems and Construction for large users of water.  
Our facilities for Machine Construction are ideal.

3745 E. Washington Street

INDIANAPOLIS, IND.

#### C. W. LANE & CO., Inc.

*General Contractors*

Steam and Electric Railroads, Water Powers Developed.  
City Water Works, Sanitary Sewers, Street Paving, Concrete Buildings.  
General Offices, Healey Building

ATLANTA, GA.

#### TIMBER FACTORS AND ESTIMATORS

SANBORN & GEARHART

International Timber Lands Investigation a Specialty.

American National Bank Bldg.

ASHEVILLE, N. C.

#### Dredging

RIVER AND HARBOR IMPROVEMENTS

Hydraulic Fills

Land Drainage

Dock Construction

GLOBE DREDGING CO.

SAVANNAH, GA.

#### SPRAY ENGINEERING COMPANY

*Engineers*

*Manufacturers*

For Spray Cooling Ponds, Irrigation  
Systems, Aerating Reservoirs, Odor  
Condensers, Gas Washers.

93 Federal Street

Of Air Washers, Spray Nozzles,  
Aerating Nozzles, Asphalt Nozzles,  
Park Sprinklers.

BOSTON, MASS.



We test foundations for buildings, bridges and dams.  
We Prospect coal and mineral lands in any part of  
North and South America.

#### WE LOOK INTO THE EARTH

By use of Diamond Core Drills

#### PENNSYLVANIA DRILLING COMPANY

2623 Whitehall Bldg., New York. 30 Carson St., Pittsburgh, Pa.  
Phone Rector 6993 Phone Hemlock 805.

## Architects

## Engineers

## Chemists

## Geologists

The unparalleled activity in every phase of industrial development of the Southern and Southwestern States is creating opportunities for technically trained men that are not surpassed by any section of America today.

Your card in the professional directory of the Manufacturers Record—for 35 years the leading exponent of Southern development—will keep your special line of work before the men who are in active charge of the South's industrial affairs.



# MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office

VOL. LXXI, No. 20.  
WEEKLY.

BALTIMORE, MAY 17, 1917.

\$4.00 A YEAR.  
SINGLE COPIES, 15 CENTS.

PUBLISHED EVERY THURSDAY BY THE  
MANUFACTURERS RECORD PUBLISHING CO.

RICHARD H. EDMONDS, Pres. VICTOR H. POWER, Treas.  
FRANK GOULD, Vice-Pres. I. S. FIELD, Sec'y.

RICHARD H. EDMONDS, Editor and General Manager

## BRANCH OFFICES:

NEW YORK, 52 Broadway CHICAGO, 919 Fisher Bldg.  
BOSTON, 733 Old South Bldg. ST. LOUIS, 608 Century Building

Subscription \$4 a year (payable in advance) to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. To Foreign Countries (including Canada) in the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as second-class matter.]

In order to avoid delays, all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

## IN WORLD'S GREATEST WAR.

THE MANUFACTURERS RECORD will carry on every envelope which goes out of its office, and on all its letterheads, the following wording:

"To save itself and civilization our country is in the world's greatest war. The utmost power of men and money alone can give us victory. Without money armies and navies will be helpless. Have you subscribed to the Liberty Loan? If not, buy a bond today."

We would suggest that every business house in the country print on all of its envelopes and stationery a statement relating to the necessity of buying these bonds, so that every piece of mail that goes through the postoffices of the United States may carry the message to rich and poor alike.

## TAXES ON EDUCATION.

[Washington Post, May 9, 1917.]

THE newspapers and magazines cannot be regarded in the present war other than as an arm of the national defense. They are as vital to the successful prosecution of a war as is the patriotic spirit of the people. Without the newspapers and magazines there would be no medium for expressing the patriotic spirit.

Nevertheless, overlooking the fact that the patriotic publications of the country have already made large sacrifices to the cause, there are pending in the Ways and Means Committee taxation proposals which in many instances amount to confiscation. Both the newspapers and magazines, already heavily burdened by the 100 per cent. increase in the cost of print paper, are crippled by the new proposals.

If the plan as reported goes through, the amount of revenue raised will be wholly insignificant in comparison to the harm done. Many of the smaller publications will have to go out of business altogether. Many will have to cut down the size of their publications, necessarily limiting the space given to Government projects, a full report of which stimulates recruiting and the financing of the war.

Discriminatory taxes of any kind are unwise, because they invariably defeat the object sought. There is a perfectly fair method of raising revenue in the form of graded income taxes which affect all persons alike and which inevitably take the full proportion that every individual is able to surrender.

Let the taxes be levied upon incomes, regardless of the source, and publishers as well as munition makers will pay the full percentage of their profits that the Government requires, whether these profits be large or small.

## MORE INTELLIGENT DISCUSSION OF FOOD SITUATION BADLY NEEDED IN WASHINGTON.

HANG the food cornerers, whether they be big gamblers or merely rich families who stock up household supplies beyond their immediate requirements, if it should be necessary in order to save the country from paying more for food than economic conditions justify; but while hanging these food conspirators it is unwise for the Government, through any department, to make hysterical statements which are without justification. That there is a very serious shortage in the food supply of the country is known to every intelligent man. It was known to the Department of Agriculture last fall. It should at that time have received the most earnest attention of the National Government as well as of State governments, but nothing was done until it was almost too late to save the situation, and now, with somewhat hysterical statements, an effort is being made to create the impression that there is no real shortage of food. Indeed, Mr. Hoover has put forth the statement that if the submarines can be defeated, and if certain things can be done and food supplies secured from other countries, and if the food situation is controlled by the Government, we may look forward to the possibility of \$1 wheat.

A mistake was also made by the Assistant Secretary of Agriculture in a statement which does not take into account that the present price of food is in part due to actual shortage now existing, and in part to the known fact that there is a great decrease in the wheat crop ahead of us. Assistant Secretary Vrooman's statement was to the effect that the farmers had not received an average of over \$1.30 per bushel for last year's wheat crop. That is as inaccurate, and, from every point of view, as thoroughly unjustified as was Mr. Hoover's statement, doubtless based on Secretary Vrooman's figures.

If Mr. Hoover's intimation of the possibility of \$1 wheat were taken seriously by the country, it would be impossible to induce the farmers to raise increased food supplies, facing as they do the certain high cost of making crops as compared with former years. The only thing that can possibly cause the farmers of the country to bend their energies to the utmost limit to produce food crops sufficient for the world's needs will be prices sufficiently high to pay them a fair profit after they have paid the present high prices of labor, of fertilizers, of agricultural implements and of everything else which they buy. No more serious mistake could be made by the nation than to undertake, by attacking food prices, to beat down the price to the farmer to unprofitable figures. Far better would it be for the nation to guarantee the farmers a minimum price for standard crops, such as wheat and corn and potatoes, even if that minimum price should be very high in comparison with former years.

That the statement of the Assistant Secretary of Agriculture is wholly incorrect is shown by the figures of the Department of Agriculture itself. The monthly reports of the Department give the average prices to farmers for the entire country for wheat from last October up to the first of May, by months, as follows:

	Per bushel.
September 1, 1916.....	\$1.31
October 1, 1916.....	1.36
November 1, 1916.....	1.58
December 1, 1916.....	1.60
January 1, 1917.....	1.50
February 1, 1917.....	1.64
March 1, 1917.....	1.64
April 1, 1917.....	1.80
May 1, 1917.....	2.45

Here are the exact figures of the Department of Agriculture, giving the average value paid to farmers for their wheat crop from the beginning of the harvesting of last year's crop up to May 1, ranging from \$1.31 per bushel steadily on up, with only one variation, to \$1.64, and on to \$1.80, and then to \$2.45 per bushel. And yet, in the face of these facts, issued by the Department, the Assistant Secretary of Agriculture makes the amazing statement that the farmers of the country have not received an average of more than \$1.30 per bushel for their wheat crop, and Mr. Hoover, adopting the statement of the Agricultural Department, uses the same figures, to the utter discrediting of all of the work that is being put forth at the present time by that Department with intelligent thinking people, who are in a position to measure the statements issued by the facts, while the uninformed are misled by such false statements.

It is quite possible that speculators, taking advantage of known conditions, have bought up a large amount of wheat and corn, and are getting the profit out of present high prices; but every rich family which, by reason of a fear of a food shortage and higher prices, has bought more than its regular weekly supply as formerly purchased has been guilty of exactly the same kind of speculation and the same effort to corner the market.

The poor man or the man of moderate means may have been justified, seeing how rapidly prices were advancing, in purchasing food supplies beyond his present needs, but this does not apply to the well-to-do nor the rich, for in the scramble of many of the latter to stock up far beyond present requirements they have done an incalculable amount of injustice to the poorer people, who could not thus protect themselves, but who must now buy at these high prices. The big speculative gambler is no more guilty against the welfare of the country than is the well-to-do family hoarder of foodstuffs. The gambler takes nothing from the market. He shifts back and forth, but he does not lessen the amount of wheat or flour in the country. The rich family hoarder—and it is known that there are rich families in Baltimore, for instance, who have bought five or six barrels of flour or more each—takes this supply entirely out of the market, lessens the available quantity for the public and, though he may never have thought of it in this light, is robbing the poor for his individual profit.

We believe it important that there should be some national control of the food situation which would eliminate the possibility of speculators cornering the market, and which would see that food was distributed fairly and equitably, so that everybody would have an equal chance at it. But let the nation avoid the hysterics so evident at present in connection with the food question in an attempt to ignore the great economic question vital to the food supply of next year. We must make food production sufficiently profitable to bring into cultivation every acre than can be tilled. We must make the farmer realize that he is assured of a fair chance of a good profit—indeed, if need be, of a large profit—for otherwise lessened cultivation would still further reduce the supply of foodstuffs until we faced actual famine conditions. The farmers of the country have never received full credit for their work nor full profit for what they have been doing as compared with the mechanics and the business men of the country.

We have patted the farmers on the back and told them that they were the bone and the sinew of the country; that upon their work depended the nation's life, and then to the utmost limit of our ability we have made unprofitable their work. We have made it difficult for the farmer to secure the labor

needed, and we have made the pay of farm labor so low that we have driven millions of people who ought to be on the farms into city employment. We have financed for every class of people in the country more freely than for the farmers, and now, because natural economic conditions affecting the whole world are forcing higher prices for food supplies, we are in danger of trying to beat down the farmer so that he cannot afford to employ labor at the advanced cost, nor to buy agricultural implements, nor to continue to till even the land which he is now cultivating. The situation is one which demands more intelligent thought than much which is being put out from Washington in regard to crops.

The country can well afford to devise some system to see that there is no waste of crops on the farms by inability to market fruits and vegetables to advantage. We can well afford to try to find some way to reduce the cost between the producer and the consumer. We can well afford to put a high minimum price on staple farm crops and hasten every effort to increase the supply of fertilizers, at a reduced cost if possible, and to hasten the work of financing farmers so that they may have facilities for enlarging their operations. But let us not make the blunder of killing the goose that laid the golden eggs. We are in serious danger of doing that at present.

It is a well-known fact that the high price of meats is tempting farmers to kill their live-stock, and the high price for chickens, with the high cost of feedstuff for them, is making it well-nigh, if not quite, impossible for farmers to produce eggs and chickens at a profit at present prices, and they are moving toward selling off their poultry. We face a decreased butter supply because of the selling off of live-stock. We face the possibility of a decrease of eggs and chickens because present prices are not affording a margin of profit between the cost of production and the selling. These things are known to every intelligent man who cares to mingle with the farmers and find out what they are thinking and doing. Let us therefore undertake to bring about a better distribution of foodstuffs and elimination of all unnecessary expense between the producer and the consumer, but let us beware how we endanger the food supply by trying to make unprofitable the work which the farmers are now doing.

## A MUCH APPRECIATED COMMENDATION

[The Meridian Dispatch.]

WE wish to pay our cordial respects to the MANUFACTURERS RECORD of Baltimore, one of the finest and most representative publications of the South, very ably edited by Mr. Richard H. Edmonds, its president and general manager, aided by a staff of live-wire experts and red-blooded Americans.

As a rule, so-called "trade publications" do not greatly interest us unless they are newspaper journals, and we believe the same feeling prevails with most busy men. But the MANUFACTURERS RECORD is a "trade journal different"—it is in a class by itself. Its splendidly-printed pages fairly scintillate with bright, newsy, up-to-date discussions of the things which strongly affect our social, commercial and industrial life, while their weekly survey of the entire business, financial and industrial field are exceedingly interesting and valuable.

But, best of all, the MANUFACTURERS RECORD is a strong protagonist of the South. It stands as a watchman on the hills. It is quick to discover and hotly resent any injustice to this section, and when it locates a prurient, festering case of Dixiephobia, it deftly handles the scalpel of invective and skillfully applies an antiseptic solution of sarcasm in a very salutary manner. And every week its pages are glowing hot with whole-hearted patriotism.

This sort of fearless, uncontrolled publication, operating throughout and strongly affecting the great industrial world—an acknowledged authority in business and commercial circles of the nation—is of immense value to the entire South.

Suffice it to say, further, that this is an unsolicited and sincere tribute from a newspaper man who believes that the forces of publicity, rightly

handled, are vitally important factors in the development of any city, any State, any great section of the country—and for the promotion of the best interests of the nation at large.

## WHITE CORN AS A FOODSTUFF SUPERIOR TO WHEAT, TO HELP MEET WORLD'S NEEDS.

OUTSIDE of the South the value of cornmeal for foodstuffs has never been adequately understood. Nor do people elsewhere seem to know the many ways in which cornmeal can be cooked to make it more palatable than the finest bread that can be produced from the finest wheat flour. If the people of this country and Europe rightly appreciated the value of cornmeal or corn flour for bread making, there would be such an increase in the demand for this foodstuff as to largely offset the shortage in the world's wheat supply.

It is well, therefore, that an organization known as the National Association of White Corn Millers has begun a campaign of advertising to awaken the country to what the South has long fully known—that is, the nutritive value and the palatable qualities of cornbread in the various forms in which it is made throughout the South. This Association also suggests that white corn flour to the extent of 15 per cent. or more can be mixed with wheat flour in the making of all bread and cake, which would effect a saving of \$200,000,000 annually in the food bill of the country.

It is stated that this is not merely a plea of these white corn millers, but that it has the approval of National Government officials, including the Council of National Defense. It is said that for four years the Bureau of Chemistry of the Department of Agriculture has been experimenting in the making of bread containing the mixtures of other flour with wheat flour, and that these experiments have conclusively proven that as much as 25 per cent. white corn flour can be mixed with wheat flour and still make a better bread from every standpoint. Moreover, cornmeal or corn flour costs less than one-half as much as wheat flour, and contains actually more food value. This food value is shown in the comparative analysis which is given, as follows:

### COMPARATIVE ANALYSIS OF FANCY PATENT WHEAT FLOUR, WHITE CORN FLOUR AND CORN STARCH.

	Fancy patent wheat flour.	White corn flour.	Corn starch.
Water .....	13.00	13.00	10.00
Protein .....	11.00	8.50	.....
Fat .....	1.00	1.25	.....
Carbohydrates .....	73.90	75.75	90.00
Fiber .....	0.50	0.75	.....
Ash .....	0.60	0.75	.....
	100.00	100.00	100.00

From the standpoint of crude chemical composition, there is very little difference between white corn flour and wheat flour. Between the flours and starch there is a great difference, starch containing no tissue-forming elements, such as fat, protein and ash.

Between the flours the difference is in the quality of the proteins, wheat flour yielding very little lysine, a substance which has been found to favor bodily growth, while white corn flour yields a considerable quantity.

It is not yet too late in many parts of the country to greatly increase the acreage in corn. In view of the certain shortage in the world's wheat supply and of the heavy decline in our own production, as indicated by Government reports, it is essential that to an extent as great as possible encouragement should be given to increased corn acreage and to the production of white cornmeal or flour. The National Association of White Corn Millers, representing a large number of leading concerns in the West as well as some in the South, says:

"What is said of white corn flour is also true of cornmeal. One pound of cornmeal retailing at 5 cents has the same food value as 10 cents' worth of wheat flour, 10 cents' worth of rice, 50 cents' worth of potatoes, 70 cents' worth of eggs and 80 cents' worth of steak. These are facts, and are the results of thorough analyses."

If this Association will aggressively carry on this campaign, it will do the country, and, indeed, all the world, a great and lasting service.

## CANADA AS AN ILLUSTRATION OF WHAT WE MUST DO.

THE Baltimore Sun has rendered the whole country a notable service in sending a staff correspondent to Canada to tell its readers what that country has done since the beginning of the war. It is only by some such object-lesson as this that our people can be waked up to what is before us in this great struggle.

Up to the present time Canada, with a population of 8,000,000, has enlisted 425,000 men. It has sent 400,000 soldiers across the sea to England and to France.

Toronto, with a claimed population of 485,000, has enlisted 50,000 men, or nearly 10 per cent. of its estimated population, and probably more than 10 per cent. of its real population. On the same basis Baltimore would have to provide about 80,000 men, and other cities throughout this country in proportion.

Under the tremendous movement made for the creation of its army, the making of munitions and the production of foodstuffs, the utmost power of Canada's potentiality in men and money has been utilized. Necessarily, wages have greatly advanced. Employment is almost universal; indeed, it would practically be impossible for idlers to be found in a country which has given itself so whole-heartedly to this great struggle.

As one outcome of these conditions there is now unprecedented activity in business and great prosperity in all lines except in the useless extravagancies, which in many respects have been cut out by the rich.

The burden which the United States has taken up means that in proportion to our population and wealth we shall in all probability have to provide relatively as many men as Canada, and since we are financing the Allies to some extent, we shall have to raise not simply billions, but tens of billions of money.

If in proportion to our ability we shall put into the fighting line in Europe as many men as Canada has sent, it will mean that 5,000,000 American soldiers would within the next two and a half years have been sent abroad.

Until our people realize the seriousness of these facts, they will not quite wake up to the great contest upon which we have entered. This contest means an enormous cost in men and money. It also means that every possible atom of productive strength of the nation in foodstuffs, in munitions, in iron and steel, in lumber, in clothes, and in other things must be thrown into the struggle, taxing to the utmost limit every leading business industry in the country, the transportation interests of all kinds and the ability of the motor car and the automobile to supplement by means of good roads the inadequate transportation facilities of the times.

## COLONEL ROOSEVELT IN RUSSIA.

REFERRING to the statement credited last week to the Rev. Robert Stuart MacArthur, D.D., about the influence upon the Russian Government of a letter of commendation from Col. Theodore Roosevelt, Dr. MacArthur writes the MANUFACTURERS RECORD:

You might have made the statement stronger. The official having read Colonel Roosevelt's letter said:

"You will win. You may go at once to the office of the Minister of the Interior. Colonel Roosevelt's name opens every door in Russia. He is the foremost man in the world today."

These are his exact words. I repeated the instance in Atlanta when I introduced Colonel Roosevelt to an audience of, it was said, more than 10,000.

## BUY LIBERTY BONDS.

IS your patriotism deep enough to touch your pocket-book? If so, subscribe immediately for Liberty Loan bonds to the extent of your ability, whether the amount be \$50 or \$50,000,000.



## NO PARTY LINES SHOULD DOMINATE IN THIS WORLD CRISIS.

TWO letters received from New England in the same mail enclose an editorial clipping from the Boston Herald which deserves the careful consideration of Washington authorities. One of these letters, from a man in a position to carefully measure the trend of New England sentiment, says:

This editorial expression may interest you. The Herald is not "yellow" or partisan, but would be recognized as one of our leading newspapers. There is not the slightest doubt that the Herald in its editorial is stating the belief of seven-tenths of the business men I meet in daily intercourse, whether they state their opinion with equal frankness or not.

Another letter from a leading business man enclosing the same editorial says:

The attached editorial from the Boston Herald of this date indicates some of our present troubles. Why cannot men in high places sink petty politics at this time and do everything in their power toward the overcoming of the great autocracy that has made the whole world wonder if there is such a thing as civilization?

The MANUFACTURERS RECORD has previously stated that there is too much politics in Washington at the present time, but it trusts that the situation is not so bad as the Boston Herald presents it. The Herald's statement is a presentation of views held by a large part of the people of the East, and possibly of other sections, presented in a conservative paper. These charges are very serious. We greatly regret that it is possible for them to be made by any reputable publication; but they are made in good faith, and whether they be wholly correct or not, they deserve the most careful consideration on the part of Washington authorities.

The MANUFACTURERS RECORD believes that in this world crisis it is incumbent upon the Administration to bring into the Cabinet, if need be by the enlargement of membership, some of the ablest men in the Republican party. This war cannot be successfully fought by any one party; it must be fought by the united country. The whole nation must be represented, and there must be no possible basis for the belief that any one political party is dominant in an emergency so stupendous as this. However much the nation desires to stand behind President Wilson and to uphold his hands and to give him the needed power to carry forward this mighty work, the nation has a right to ask of President Wilson that he bring into his immediate organization, be it Cabinet or what not, a fair proportion of the ablest men to be found in the country, regardless of their political affiliations, with power to act, not simply to advise, as is the case in some of these appointments. In justice to the sentiment of those who feel that the Administration is not taking this position, we publish the Herald's editorial presentation, even though we cannot agree with all of its details:

[From Boston Herald, May 1.]

### IS THE ADMINISTRATION CONDUCTING A PARTY WAR?

Is this war to be successfully concluded or is it to be carried on as a party affair?

The moral issues are the same now that they were in 1914. The contest is democracy against autocracy. So says Wilson—so it was in 1914, 1915 and 1916. General Wood, Colonel Roosevelt, Senator Lodge and Captain Gardner recognized the issue and urged the President to get ready. The President either failed to see the point or for political reasons thought his re-election demanded as the issue "He kept us out of war." He won the election. Had he lost it he would be known to history as a second Buchanan. Now we are in war. The President has spoken some beautiful words. But he is running the war as a party affair. We owe our Plattsburg camps to Wood. Wilson punishes Wood, a Republican, by consigning him, the senior major-general in the army, to the poorest post in the country. Even Hawaii is considered more important than Charleston.

Why has he not accepted Colonel Roosevelt's tender of 150,000 men outside the conscription limits and urged Congress to pass the necessary legislation? Because if "Teddy" goes abroad and returns alive, Wilson, as a student of history, knows that the name that will live in history will be "Roosevelt" and not "Wilson." Who knows the name of the President of France? Everybody in the world knows the name of "Joffre." This is the explanation of the opposition to Roosevelt's being permitted to go abroad. Roosevelt has urged for nearly a year "Get

ready." Wilson has until lately said "Do nothing." Who was right?

The Government is calling for hundreds of thousands of volunteers for the navy, regular army and national guard. The cry that "Roosevelt's enlistment" will be contrary to the "conscription act" has no basis. The only real reason why the President does not use his great influence to get Roosevelt's help is fear of the verdict of history if Roosevelt returns a hero. Again, who wants to enlist in a regular army to be ruled by Wilson and Baker; or to enlist in a navy ruled by Wilson and Daniels? Such incompetency was never before known as that shown by Daniels. Business men of vast experience are called to Washington, hang around for weeks and return home with the same story of nothing done. Daniels' incompetency is proverbial.

Attempts to organize the industrial plants are held up because Mr. Gompers has not yet given his consent, and the Government will not move until Gompers gives his consent. It is well understood in Washington that the advisory council consisting of Daniel Willard, Julius Rosenwald, Bernard Baruch, Howard Coffin and others are held up by Daniels and Baker; they are obedient to Gompers. Everybody understands it in Washington. Why doesn't Wilson step in and do something? Is he always going to play politics? Who is President, Wilson or Gompers? Is the President keeping Daniels and Baker simply because he is not willing to admit that the wrong men have been put in places of authority? Secretary Garrison was a man. He resigned because he would not be responsible for the mistakes and political moves of Wilson. Here is a case of the greatest emergency this country has ever known, and we are held back because Wilson won't put big men in places of power.

When the French mission and the English mission came here only Democrats were invited to meet and consult with them. What a travesty! If it were not tragic it would be comic. When Congressmen offer their services for the War Wilson writes a personal note to the Democrats telling them they can serve their country best by staying in Washington. The Republicans are referred to the War Department for further orders. Government employes, now mostly Democrats, are exempted from the conscription bill. Why? Because they are Democrats?

Now people are urged to "Stand behind the President." This is not a monarchy. This is not an autocracy. This is a Government of the people, by the people, for the people. We will stand behind the United States, right or wrong, but we will stand behind the President only when he is right, and until he changes his ways, until he shows his own patriotism by displacing Daniels and Baker and putting in their places competent men, until he stops permitting Gompers holding up the Government, we decline to wear a halter around our necks.

Because Senator Weeks refused to permit McAdoo to have the power to put the proceeds of the sale of bonds in favored banks word has gone forth from the White House that "Weeks must be defeated for re-election." How do the people of Massachusetts like this kind of dictation? More power is being conferred upon Wilson than was ever before given to any man, king, czar, kaiser or dictator. Until the President shows that he is worthy of this authority by removing Daniels and Baker and stops abdicating his power in favor of Gompers, stops playing partisan politics and becomes a President of all the people, we decline blindly to "Stand behind the President."

## OUR SULPHUR SUPPLY ABSOLUTELY VITAL FOR EXPLOSIVES AND FERTILIZERS.

SINCE importations of pyrites have practically ceased, American munition and fertilizer manufacturers must largely turn to sulphur for their supply of sulphuric acid, without which we would be unable to continue the war of civilization against barbarism. Provisionally for the nation, we have large sulphur deposits in Louisiana and Texas which have been developed by the Union Sulphur Co. and the Freeport Sulphur Co., and from which we are getting approximately 98 per cent. of the sulphur consumed in the United States, and which is probably 80 per cent. of the sulphur produced in the world.

Because of the scarcity of ships and the submarine war, the Spanish supply of pyrites has been cut off, and we are absolutely dependent upon these two sulphur companies for material for producing high explosives and as an aid in increasing the food crops of the country through its use in most fertilizers. For this reason it is vital that we should do everything to protect these properties and to aid in production, and in transportation from the mines to the munition and fertilizer manufacturing centers of the South and East.

The United States Navy and War Departments have recognized the seriousness of the situation, and are protecting these sulphur developments. Now it is up to the Government to do all in its power to better the facilities for water transportation.

In this connection the Freeport Sulphur Co. has compiled some facts regarding the Freeport, Tex., harbor and its importance in the plan of national defense in a printed pamphlet, which contains in part the following:

In normal times the improvements of the Freeport harbor was considered mainly from its importance to commerce. It is the only land-locked harbor on the Gulf of Mexico furnishing protection against storms.

It is due to the location of the sulphur mines on Freeport harbor that it assumes its importance as a factor in respect to the nation's defence. Up to the end of the year 1916 this new importance did not exist, inasmuch as sulphuric acid was obtainable from both domestic and imported pyrites, the latter coming chiefly from Spain and Portugal. The domestic production of pyrites in 1916 was about 450,000 tons. There were imported in that year from Spain and Portugal about 1,250,000 tons. The domestic supply of pyrites is hence but a small factor in the total consumption of this country—totally inadequate to supply the requirements for sulphuric acid. The consumption of sulphur, owing to the requirements in the manufacture of high explosives, etc., has grown from 300,000 tons in normal times to 900,000 tons during the year 1916, and the indications are that this requirement will reach 1,000,000 tons or more during the present year. It is estimated by the National Fertilizer Association that about 600,000 tons of sulphur will be required during the year 1917 to replace pyrites for the manufacture of sulphuric acid for fertilizers. Sulphur is hence the chief dependent, both for munitions and for the manufacture of fertilizers. There is not sufficient sulphur produced in the world to meet the commercial, munition and fertilizer requirements. The situation may be considered alarming. The importance of the two sulphur industries referred to above cannot be exaggerated.

The prompt shipment of sulphur from the harbor of Freeport is a necessity, and the deepening of the harbor to accommodate ships of ordinary depth is manifest. The United States Government is maintaining the channel at only 18 feet, thus confining steamship transportation to light-draft vessels, which are exceedingly scarce. Deepening the channel to twenty-five feet has been recommended by the Board of Engineers for Rivers and Harbors and the War Department, whose estimate of cost is \$455,000—truly a small sum involved to furnish a sufficient depth of water for the draft of ordinary coastwise steamships and a safe anchorage for the United States warships. All reports and data embodying these recommendations are obtainable in the departments in Washington.

In this connection a letter from Parsons & Petit of New York to the Freeport Sulphur Co. bearing on the need of sulphur for sulphuric acid for fertilizers is important, as upon the development of an adequate supply of fertilizers depends our ability to produce the foodstuffs and the cotton necessary for the world war.

In their letter to the Freeport Company, written under date of April 10, Parsons & Petit say:

We have been approached by Mr. A. D. Ledoux of this city, on behalf of the heretofore consumers of pyrites, who desires to submit for your consideration supplying them with 600,000 tons of sulphur—delivery over the balance of the year 1917.

There has recently been a conference at Atlantic City of the large consumers of pyrites in this country, who now find that it is impossible to import from Spain and Portugal what is needed, and hence they see no way to supply their needs, except from sulphur *per se*. You will recall that the imports from Spain and Portugal during the year 1916 were approximately 1,250,000 tons. Our domestic production only amounts to about 450,000 tons.

Their requirements for sulphuric acid are in connection with the manufacture of fertilizers, and in normal times they are the principal consumers of sulphuric acid. As stated, Mr. Ledoux now informs us that, owing to the war, the scarcity of steamers available for this trade is making the transportation problem increasingly difficult, if not impossible, and they are compelled to turn to sulphur.

This is an alarming situation if one takes into consideration the use of sulphur for sulphuric acid since the war began. The consumption of sulphur in this country for all purposes, you will remember, was approximately 300,000 tons in normal times, of which probably less than 25 per cent. was used for making powder. The entire consumption of sulphur itself in the United States during the year 1916 for normal uses, plus the requirements for war munitions, totaled approximately 900,000 tons. If to this is added the 600,000 tons which the fertilizer manufacturers figure their necessities to be, we repeat it is an alarming situation, as there is not enough sulphur produced in the world to meet these requirements.

Beyond stating to Mr. Ledoux that the capacity of the Freeport Sulphur Co. would not be sufficient to take care of the company's existing contracts and an additional amount of 600,000 tons, or anything approaching it, we have advised him that we were submitting the matter to you for your reply.

The increase in consumption in 1916 from normal consumption (about 300,000 tons) to war-time consumption—900,000 tons—is accounted for by the increased absorption of sulphur needed in making sulphuric acid for high explosives.

## HEAVY SHORTAGE IN IRON-ORE SUPPLIES.

IN its last issue the Iron Age, referring to the late opening of the shipping season from Lake Superior, states that this has been a serious handicap to the iron-ore shipments of that district. The movement is reported as about 3,000,000 tons behind last year's shipments to the same date, and it is estimated that by June 1 there will be a shortage of 5,000,000 tons as compared with the shipments up to that date last year, and on this the Iron Age says: "This amount is not likely to be made up."

Here is one of the disadvantages to which the MANUFACTURERS RECORD has persistently and unceasingly called attention, namely, the danger from one cause or another of a lessening of the output of the Lake Superior ore supply to meet the pressing needs of the country. With the nation needing far more iron and steel than it produced last year, with civilization itself depending upon our ability to meet these requirements, we face the danger of a shortage of 5,000,000 tons of iron ore from the Lake Superior district as compared with the previous year.

There are some things which cannot by any human possibility be done, and one of these is a sudden and rapid increase of ore production and of transportation equal to the needs of the times, when a delayed shipping season, by reason of ice, makes it impossible to handle the ore needed to feed the furnaces of the country. Had the urgent advice of the MANUFACTURERS RECORD during the last two years been taken by the Steel Corporation and other great steel interests, and the available supplies of iron ore in the South been developed and large plants built for their utilization, some of the seriousness of this shortage of Lake Superior ores would have been overcome.

We are face to face with a decreased supply of iron ore at a time when civilization needs a vast increase. We also face the possibility of a serious curtailment of our imports of iron ore by reason of a decrease in the supply of shipping and the inability to bring ores from other countries as freely as formerly. Thus the logic of events demonstrates, as nothing else could have done, the mistake of those who, during the last two and a half years of war, have entirely failed to grasp the meaning of this situation, and who heeded not the persistent advice which we have tried to present, based on facts open to any man's investigation and easily known to every man who would care to study the conditions. The MANUFACTURERS RECORD claims no special gift of foreknowledge on the subject; it only presented facts for consideration which could easily have been understood by everyone, especially by the iron and steel people of the country, had they cared to take the trouble to look into the matter and see the danger that we were facing.

It is too late to save the situation for this year. We cannot war against nature for not giving us an earlier season for Lake transportation. We cannot overcome what has already passed, and we cannot build iron and steel plants in the South and open new mines rapidly enough to meet the conditions which now prevail for this year. But we can, by wise action, get ready for the conditions which will exist next year, and the year after, and for years to come. At the time when we ought to be able to greatly increase our steel output, when the building of ships, the making of munitions of war and the construction of cars and locomotives are essential to saving the Allies from destruction, and thus saving ourselves in the most terrific contest which the world has ever witnessed, we find a shortage of ore and an inability to overcome this difficulty because we failed to get ready in time.

Many of our leading business men are inclined at times to criticize the delays of Government officials. They complain about the red tape in the departments at Washington. They urge that greater activity be thrown into the work, and that a broader realization of the situation be created. Much of this is, unfortunately, fully justified. But these very business men have themselves been almost as shortsighted in business preparedness as the National Government has been in army and navy and food preparedness. Until the great leaders in finance and business have measured up to their responsi-

bility they cannot afford to criticize the National Government, however shortsighted it may have been in many respects in doing the things which should have been done years ago. But as the National Government is now bending its energies to the creation of an army and navy, it behooves these capitalists and business men to bend their energies to the development of iron and steel in other sections than those dependent upon Lake Superior ore, and thus set Washington a good example.

Will they prove more farsighted in this respect in the future than in the past?

## EPOCHAL CHANGES GROWING OUT OF DEMOCRACY'S BATTLE FOR CIVILIZATION.

DISCUSSING the great changes which are taking place in railroad management by reason of a practical transference of the railroad interests of the country to Government control, Mr. Charles H. Grasty, writing from Washington to the New York Times, says:

A development that has not yet been even faintly appreciated by the general public is the nationalization of the railroads. The belief that this is temporary, for war purposes only, will, in my opinion, be disappointed. We shall never go back to the old system. The railroads can't and the Government won't.

The five railroad presidents to whom was made a voluntary delegation of power over 175 companies with 205,000 miles of road and \$17,000,000,000 capital are on the job. Messrs. Harrison, Rea, Kruttschnitt, Elliott and Holden are the greatest business potentates this world has ever seen, but they rule for a democracy of transportation. The stupendous thing has come so quietly that the railroads themselves don't realize that they are no longer on the map. For it is a fact that the individual units have disappeared and one big map of the United States has been laid down on the conference table. The country and not the roads is studied by the commission.

Last week these gentlemen took the subject up from this angle, and their first decision was that the most vital need of the country was coal. It was necessary that the supply of potential energy should be kept constant. The order went out to expedite coal ahead of other freight. It was done instantly, and anybody who will take the trouble to make a minute examination will find that coal is moving more steadily over the railroads than it was ten days ago.

These railroad presidents have immediately put on one side their relations with particular properties. Under the stress of war they think in terms of America, not of Pennsylvania, or Burlington, or any other road or group of roads.

Another concrete illustration: The railroads needed 40,000 box cars, but they were needed a great deal worse by some of our allies. There was found a way to make the present supply of box cars go further, and so put our manufacturing facilities at the disposal of our allies. The stealing of cars by the roads has been a regular business. If one road got another road's cars and needed it, it just kept it until some other road "swiped" it. It became necessary for the Interstate Commerce Commission to adopt a stringent rule. Thus, if a Northern Pacific car was emptied at Pittsburgh, it could only be loaded for shipment in the direction of the road owning it.

All that is changed under the new system. If there is freight at the Pittsburgh terminal for Washington or New York, it is loaded on the Northern Pacific car and shipped right off to its destination. The owner road gets 75 cents a day for the car, which pays on the investment. The public gets the service, and all the railroads together get the economy. Everybody's interest is bettered. When it is known that there are a million box cars in the country (against 7300 Pullman cars), it will be seen what an item box car economy is.

Railroad men started in guessing the savings of the new deal pretty moderately, but upon every re-examination they reckon them at a large figure. As a matter of fact, nobody has begun to reach the real estimate of utilization and economy. Not much imagination is needed to see what happens to the million box cars—perhaps they become in effect a million and a quarter. But what about bridges and terminals and facilities of all sorts now only partly used, and capable of contributing in so much greater measure to public convenience? The time has not yet come to talk of economy in personal services. But enough has already transpired to make evident the new epoch that has come in the great transportation interest as the first visible result of the war.

It is quite true that no one can yet measure the full meaning of this change, but it does mean, we are quite sure, that all of the railroads of the country will be operated to the best possible advantage for every interest under the general direction of a group of the ablest railroad presidents in America. What will be the future outcome of this situation no one can say. We are in a period of world changes. Before the rise of democracy, autocr-

racy is doomed in government, however long and desperate may be the struggle. How far this change will mean a broadening of all human affairs, in private as well as governmental life, no man can yet forecast, but the MANUFACTURERS RECORD has an abiding faith that the outcome will be for the final betterment of all civilization.

In the first issue after the beginning of the war, nearly three years ago, the MANUFACTURERS RECORD said that the ultimate result would be the downfall of those who believed in the divine right to rule, and that on the fearful wreck and ruin to be wrought by war humanity would build a higher and a better civilization.

We believe that this will be true in governmental affairs, and we trust and believe that it will be true in business affairs, and that a mighty change is just ahead of us in which there will come an advance of civilization and a widening of its benefits to all classes throughout the world. We do not believe that the low wages of the past will prevail when the war is over, but that higher wages and better living conditions will be one of the great outcomes of this fearful struggle.

## THE DOG QUESTION AGAIN.

Editor Manufacturers Record:

Boston, Mass., May 14.

That proposition in this week's MANUFACTURERS RECORD to tax dogs out of existence is the product of some person of disordered mind who never knows dogs at all, and doesn't want to. I hope you are not guilty, and I know Mr. Edmonds isn't, for I know he likes dogs too well to be responsible for such sentiment. Why abuse the one thing that under all circumstances is faithful, has all the good qualities of human beings and none of the vices, can be trusted through thick and thin, good and evil, and all the time?

Every good dog has fleas, of course, but they can be gotten rid of by your sleeping with him. There's nothing else bad about him. S. I. C.

Our Boston correspondent, in this personal letter to a member of the staff, is in error. The editor of the MANUFACTURERS RECORD is the guilty party, dearly loving dogs as he does, in being responsible for the suggestion that they should be heavily taxed as a war measure and in order to greatly lessen their number so that the food which they now consume might be saved for other purposes and that sheep-raising might be increased by the decrease of sheep-killing dogs.

The writer remembers with vivid interest the first ugly puppy which, as a tiny youngster, he owned and which he thought was the most beautiful thing in the world. He remembers the nightly struggle to hide this little puppy in bed so that its presence might not be discovered. He has loved a hunting dog and years ago followed him over many a field and through many a wood. He has loved the collie and has owned some with an intelligence greater than that of many human beings. He could tell some tales of the more than human intelligence of a faithful collie, the very telling of which would open him to the charge of having been a member of the Ananias Club and which nothing but the testimony of others would ever make the public accept.

Nevertheless and notwithstanding all these facts, the country is full of worthless curs, whose presence makes sheep-raising almost an impossibility. Indeed, many of these best beloved, fine dogs are easily led astray in sheep-killing, and where sheep-killing dogs prevail sheep-raising inevitably dies.

In the light of a world facing almost starvation, shall we not make a supreme effort to increase the food supply that hungry children may be fed, that starving men and women may be saved from threatened famine; or shall we permit dogs of high and low degree, especially those of low degree, to overrun the earth and make the increase of food supply through sheep-raising an impossibility?

Will our New England friend, however much he may love the dog, however much he may appreciate that affection which changes not, however much he may enjoy the companionship of an intelligent dog, will he, at this juncture, put the dog ahead of starving women and children? No. We know he will not and we know that he would gladly pay a tax of \$2 or \$3 a year as a war revenue in order to keep him.



## SECRETARY HOUSTON WIRES REASONS FOR OPPOSING PROPOSITION TO APPROPRIATE \$10,000,000 FOR IMPORTATION OF NITRATES.

**I**N reply to a request as to his reason for opposing the proposed measure for an appropriation of \$10,000,000 to purchase nitrates in Chile in order to increase the supply in this country, Secretary Houston of the Agricultural Department wires to the MANUFACTURERS RECORD as follows:

Washington, D. C., May 16, 1917.

Editor Manufacturers Record:

Am not opposed to the importation of nitrate or the use of nitrate if it could be secured at a price which would justify investment.

Impossible to secure nitrate now from Chile for application to land this season. Government could spare only 400 tons. This has cost, except in one instance, \$60 a ton at seaboard. Quantity too small to be of consequence. Do not know of private supplies that could be secured, and if so, rates quoted of \$76 per ton seaboard, and transportation to farmers would increase this. Rates from private concerns include \$47 per ton in Chile, same as Government price, and transportation in private ships, at abnormal rates for tonnage, insurance and wages. Because of conditions, Government cannot now use transports, and at present could get private ships only at high rates. Have expressed doubt as to wisdom of average farmer investing in nitrate at prices at which it could be obtained, namely, \$75 to \$80 per ton. Experts doubt whether, in such circumstances, nitrate could be used profitably except by very skillful farmers.

D. F. HOUSTON, Secy.

This situation, thus outlined by Secretary Houston, makes it all the more important that the proposed Government nitrate plant or plants should be built at the earliest moment possible, in order to supply the nitrates needed for the agricultural interests of the country. Not a day should be lost in pushing the building of these plants in order to save the country from this acute situation as to shortage of nitrates, against which the MANUFACTURERS RECORD has again and again warned the nation. Long ago we pointed out the fearful risk that would be incurred in the event of war and the great risk incurred at all times in view of the possibility of a lack of nitrates, which make possible the fertility of the soil.

## THE MEANING TO THE PUBLIC OF THE PROPOSED TAXATION ON NEWSPAPER EXISTENCE.

**W**E believe that the best newspapers in the United States are united in the thought that to whatever extent the war necessities may demand they are willing to pay a taxation on their profit, even to the extent of giving up to the Government every dollar of profit, should such a drastic situation develop for all the industries of the country.

The newspapers are not asking that they shall be relieved from taxation on their capital or their profits, however heavy the taxation may be made, but they are earnestly protesting against a proposed taxation which would completely destroy a very large part of the newspaper property of the country, wipe out of existence many of those that have been built up during long years of work, leaving nothing whatsoever to represent the capital invested and the years of labor involved. It would not be possible for a large proportion of the papers in this country to pay the proposed postage rate, which, under the guise of a war measure, has been advocated in Congress. This bill would put upon the newspapers of the country an expense far greater than their total net profits and make the publication of many of them an utter impossibility

and at the same time by killing off papers and lessening the circulation of others would become a revenue reducer and not a revenue producer.

The influence of the newspapers of the country, and especially those of national circulation, for the broadening of the national thought, for the breaking down of all sectional questions, would be curtailed to an extent scarcely conceivable by those who have not studied the situation. The more widely the scientific, technical, medical, chemical, industrial, and kindred publications are circulated throughout the country, the greater is their power to reach the public and broaden the Nation's thought and the Nation's horizon. The Pacific Coast man, for instance, who sees only the papers of his own section, becomes narrow-visioned and knows nothing of what is going on in national life beyond the limited range of his local papers. The Southern man who confined himself to the reading of purely Southern papers would know nothing about the great currents of trade, about the economic questions and the political issues of the Nation other than those stated in the narrow terms of papers necessarily limited by local conditions to local circulation. The Western man who thinks only in terms of the West would know nothing about what is going on elsewhere and could not possibly adequately understand the thought and the spirit of other sections.

Never before was it so important that the broadening influence of national circulation should be felt throughout the Nation. Upon publications of national circulation depends to a large extent the spirit with which the Nation rises to meet the emergency of war. The Government needs the co-operation to the utmost extent of these papers of national circulation, and it is an interesting fact that, at the very beginning of war, practically all of the leading industrial and technical papers of the country offered their services to the Government for any amount of advertising that might be needed without a dollar of cost to the Nation whenever called upon in the work of advancing the Nation's welfare.

We do not for a moment, in a situation of this kind, undertake to place the work of the MANUFACTURERS RECORD in any light different from that of dozens of other papers of wide national circulation, representing the industrial and business activities of the Nation, but we do know that the strength and power of the MANUFACTURERS RECORD for the good of the country, for bringing the North and the West and the South into closer business relations, for making known to other sections the vast resources of the South and for turning the tide of capital from other sections into the South, has been due to its wide circulation throughout the entire country, and we do know that under the proposed postage increase and zone system it would not be possible for this work to be continued to the same extent as in the past, nor would it ever have been possible for the MANUFACTURERS RECORD to exist under such a proposed system.

Take, for instance, this particular issue and in it will be found many facts of vital importance for the entire Nation to know in regard to the value of the cotton crop as a food producer, and of the material activities which are taking place throughout the South, which are strengthening the Nation's life and making possible its ability to meet the strain of war. These business facts are regarded by every branch of the national Government as of the utmost importance; they are appreciated by the business leaders of the entire country—North, South, East and West. For more than a third of a century the

MANUFACTURERS RECORD has given its attention wholly to the one great subject of the development of the South, recognizing that its development was broader than merely material things, that it meant the rounding out of national life and the creation of a broad spirit of Americanism in all parts of the land that the South might know the North and the North might know the South and in this common knowledge all sections might grow stronger and greater.

This work could never have been done, nor could the MANUFACTURERS RECORD ever have existed under the bill as now proposed in Congress. Repeating what we have already said, recognizing the responsibility of the Nation to carry on the war, we are willing, if need be, that every dollar of profit earned shall be paid into the national Government without even a dollar of dividend on the capital invested, representing more than thirty-five years of unceasing work; but we do not believe that such a condition is likely to come about. We pledge ourselves here, however, to be willing to meet that situation if it does come, but we at least seek, as other publications do, the privilege of existence and of carrying forward the work that we are doing unhampered by burdens which would lessen ability to work, minimizing the power of the MANUFACTURERS RECORD in widening its circulation for the good of all sections and thus destroying all for which it has labored since it was first established.

In mentioning the MANUFACTURERS RECORD in this respect, we are simply using it as an illustration of the entire situation, for in one way or another practically every other publication has been doing its own appointed work, and the broader its circulation has been the greater has been its influence for national welfare. This problem is not one which primarily concerns the newspapers, even if they should be destroyed by such drastic measures as that proposed; on the contrary it primarily concerns people at large. If the MANUFACTURERS RECORD, for instance, had to go out of existence the people connected with its employment would individually suffer and the capital which has been created through years of work would be destroyed, but all of this would merely affect the hundred or so people directly identified with its publication and dependent upon it. On the other hand, its readers throughout the entire country who look to it for information, and who depend upon it for its facts and figures about the country would be deprived of information of immense value to them and which they could not possibly secure anywhere else.

Take another case and suppose, for instance, that the *Literary Digest* could not be continued. A million people throughout the country would be deprived of a source of great information, invaluable to students, to lawyers, to doctors, and to all others who need to know broadly the thought of the land without having the opportunity to read the papers of all sections. The *Saturday Evening Post* is another example of the damage which would be done by limiting circulation. It has been of almost infinite value to the country through giving to its several million readers a broader knowledge of the war conditions in Europe and what we shall have to do to meet our war problems than could possibly have been secured in any other way. Some recent issues of that publication are so vitally important from this standpoint that the national Government would have been justified in republishing these articles and putting them in the hand of every reading man and woman in the United States.

To limit national circulation by imposing the unwise and destructive zone system upon publishers

of the country would be a monumental mistake which would inevitably prove most serious to national life.

A very clear presentation of the whole postage situation and its relation to the country was made by Mr. James Weber Linn of the University of Chicago on May 15 before the Senate Finance Committee. In this statement Mr. Linn said that the proposed increase would "stab nearer the heart of the nation" than any other possible action by Congress, and in discussing the subject, said:

I am not speaking from the slightest financial interest in the publishing business. I have no connection with it in any way. What I should like to do is to point out the real result on the nation if you increase the price and limit the circulation of newspapers and magazines. Many of these newspapers and magazines have a definite educational influence. They have taken a recognized place in modern education. Books do not serve so well.

Now I can take even the Congressional Record and understand quite a good deal of it. If you say to your country population, here, we'll cut off the magazines and newspapers, they won't read at all; and you will strangle them as surely as you would strangle a baby if you cut off its supply of milk and water and made it eat bread. You give the baby what it can digest and by and by it can eat bread. You let these people have the reading habit and by and by they will get up to Shakespeare and the Congressional Record.

You shut off the farm journals, as these proposed rates would shut them off, and you decrease the productive power of the country by millions of dollars. You shut off the trade journals and you decrease the manufacturing power of the country by many more millions. You shut off the newspapers with their careful, scientific knowledge about the care of health information that hundreds of them are dispersing daily, and you might as well go out and shoot down 10,000 doctors; you would do less actual harm.

You say these newspapers and magazines would not be destroyed by these proposed laws. You know what would happen. You know that the prices to subscribers would rise and circulation would narrow. You know that the people you would shut out are the people that must have the reading habit if this is going to be a democratic nation—the small town people, the country people. These publications are printed in big cities. The first zone, the cheapest zone, would be in and near these cities. That means you have shut out education just where it is most needed. The cities will read anyhow. But the rural district depends, to a great extent, on newspapers and magazines.

I say as a college teacher a man who has been in the educational profession almost a generation, that in my judgment you could hardly stab nearer the heart of the nation than by stabbing at the country circulation of newspapers and magazines, and yet that is exactly where this increase in second-class postal rates, this zone system, is directing the knife.

### THE SOUTH'S DOMINANCE IN COTTON MANUFACTURING.

WEEKLY reports of the cotton movement furnished by Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, of themselves give continuous, unbroken testimony to the steadily increasing importance of the southern cotton manufacturing industry. The report for the week ending May 11th, printed in this week's issue of the MANUFACTURERS RECORD shows, for example, that the takings for Northern spinners for the 284 days of the present season have been 2,489,671 bales, a decrease for the same period of the previous year of 165,814 bales, while the takings by the Southern spinners were 3,712,082 bales, an increase of 283,258 bales. Since the first of August, therefore, the South has taken 1,223,411 bales in excess of the amount taken by all the other spinners of the United States.

There are invested in the cotton mills of the South at the present time approximately \$350,000,000. Of the 32,306,066 spindles in the United States, the South, at the close of the cotton year 1915-16 was credited with 13,256,066 and to this number large additions are being steadily made.

### A BIG GEORGIA LIVESTOCK, CORN AND COTTON OPERATION.

THE E. T. COMER COMPANY'S 15,300-acre stock farm, located in Screven and Burke counties, Georgia, is a typical illustration of the successful application of modern business principles to farm management. In the center of the plantation is the village of Millhaven, on the Savannah & Northwestern Railroad. The company owns the town, with the exception of the railroad property and the public road. The railroad and a system of connecting plantation roads afford adequate and convenient transportation facilities necessary to every business enterprise. All the fertilizer used on the plantation is manufactured in the factory at Millhaven, and here also is a grist mill, cottonseed-oil mill and the community pumping station for the water supply.

Thomas Pearce, in writing of the operations of this company in the Savannah News, states that it is a notable example of what can be done with Georgia land, and that primarily, while stock-raising is the chief business, large quantities of cotton are produced by its 200 "croppers," or tenants, who farm on a percentage basis.

The Millhaven tract was bought about ten years ago by E. T. Comer, a Georgian who had had long experience as a Western stock raiser, and who was convinced of the possibilities of the application of Western methods on an intensive scale to Georgia conditions. He formed the company of which he is president, with F. W. Comer secretary and treasurer, and L. J. Kilpatrick as general manager. Other heads of the organization are a cattle expert, in charge of the stock, and eight overseers, or superintendents, of the several communities of subdivisions of the plantation, each with headquarters where resides the community's overseer. Around the headquarters are grouped some twenty-five one-horse farms let to negro tenants on the "shares" plan of receiving payment in percentage of crops raised over and above all expenses of production. In addition, the company employs about fifty "wage" plows—field hands paid by the day or month.

The farms are under the supervision of the community overseer, who apportions to each tenant farmer the amount of land to be planted in cotton and various foodstuffs, which assures diversification of crops on the plantation as a whole. About 2300 bales of cotton were raised on the plantation last year. At present there is a herd of about 1500 head of cattle, about 2000 hogs and several hundred head of sheep and goats, all of which are maintained almost entirely from crops produced on the company's land.

Success in cattle-raising on the Millhaven farm may be attributed in part to the eradication of the cattle tick by regular "dipping." A large creek running through the property furnishes an abundance of water, and on either side of this stream is ample pasturage for the stock. The principal food crop raised is corn. Grain is harvested and fed to cattle for concentrated feed for fattening purposes, and also put into the nine silos which are distributed at the different headquarters. Quantities of forage crops, such as winter rye, oats, velvet beans and peas, are also raised for consumption by the stock, and in the case of the legumes for soil fertilization. These food crops, pasturage and cottonseed meal make an ideal balanced ration for the stock.

Another even larger similar undertaking in this section is that of the Georgia Land & Livestock Co., which is converting 128,000 acres near Savannah at Townsend, Ga., along scientific and business lines into a model self-sustaining stock farm. It is stated that in the development of this property the company intends to build a large sawmill, a packing plant and pulp mill. Fifty modern silos are to be built, and at least 3000 acres are to be cultivated, while the company now has 100,000 acres under fence.

Numerous organizations of stock-raising companies are being effected to enter extensively in cattle-raising in the South, for it is becoming known that this section offers greater advantages for work of this kind than can be found anywhere else in the United States.

### "OUR PATRIOTISM WILL BE MEASURED BY OUR EFFICIENCY" IN RESPONDING TO THIS CALL FOR FOODSTUFFS.

WISELY the United States Department of Agriculture is sending broadcast through the country circulars urging increased acreage in sorghums, including kafir, milo and feterita. Referring to this the Department says that all grain sorghum make good silage, and since grain sorghums and beef cattle are grown in the same districts, the grain should be fed much more extensively where it is grown, thus saving handling and freight charges. It also says:

"The grain of the white-seeded varieties is excellent for human food. It makes a meal similar to corn meal and can be used in every way like corn meal, either by itself or mixed with wheat flour. The grain can be popped like popcorn.

"As the grain sorghums can be used both for stock feed and as human food, there should be no difficulty in using all that is grown and safely harvested this year. In the districts mentioned every available acre of upland that can be effectively handled should be sown in grain sorghums. On bottom lands here and on uplands even farther east in the States named a small acreage of kafir is a good insurance against the effects of drought."

Another circular issued by the Department also of vital importance, is one urging that farmers should not kill any breeding animals. Do not let the temptation of high prices, says this circular, now being offered for livestock, or undue fear of the prices asked for many popular feeds, mislead you into killing a cow or a sow, or any other breeding livestock. While the Department does not mention poultry, it is as important that this rule should prevail in poultry as in other things. Indeed, it is most desirable that as few young chickens should be killed this summer as possible. The whole effort of the country during this summer should be to prepare for the increased food supply that must be met in 1918. However great the demand for foodstuffs may be this year, the big strain upon our ability to produce food will not be felt until in 1918. What we do now in preparing for livestock and other food production in 1918 will demonstrate whether we are a shortsighted, reckless people, or whether we are realizing the supreme necessity of making the output of 1918 far greater than it is possible to make that of 1917.

Every banker and merchant and business men generally should secure from the Department of Agriculture all of these bulletins, study them intelligently and make a vigorous campaign to press their importance upon the attention of every farmer, even the most backward who may least understand the situation.

Indicative of the way in which the commercial organizations of the South are co-operating in this campaign for increased foodstuffs, is a circular that is being issued by the Chamber of Commerce of Macon, in which the following statements are made:

All Georgians can not respond to the call to arms. They can assist in securing a victorious outcome by furnishing food essentials to armies and Allies alike.

The United States has on hand in this country an abundance of money and munitions, which are being delivered to our allies unstintingly. Our allies, both in armies and in homes, need food more than munitions and men, and we are unable to supply their call for food. You can help in this alarming and urgent call.

An increase in food production, under present conditions, can be made profitable as well as patriotic.

The Cotton States are not now feeding themselves. They can not assist in feeding the world, but they must feed themselves. There is no surplus of any food anywhere. The South can and must at this time plant the following food crops:

For Men: Corn, Potatoes, Peas, Peanuts, Sugar Cane, Sorghum.

For Live Stock: Velvet Beans, Soy Beans, Potatoes, Peas, Millet, Peanuts.

Every citizen, young and old, should plant a garden, consuming what is needed, canning and drying the surplus.

The Macon Canning Company, which is now being built



in Macon will need vegetables and fruits of all kinds, at market price. No stock hogs, or cattle should be slaughtered during the continuance of the war.

The Macon Packing Company, in Macon, will use all surplus and insure its conservation.

Poultry is essential and eggs are required in all hospitals and homes.

All dairy supplies must be increased; or children and sick will suffer.

We strongly urge that this call for food supplies be published in the daily papers of your community, that it be read in every pulpit next Sunday and that each school teacher read it to each class in your community.

That every citizen is urged to not only increase the production of some food crops as well as to conserve to the utmost the present supply on hand.

All food crops are now and will continue to be more profitable than ever before.

Our patriotism will be measured by our efficiency in responding to this call.

Many other commercial organizations in the South are doing equally as good work, but every one, great and small, must get behind this movement and never let up.

### NEW DEPORTATIONS ORDERED IN BELGIUM.

Havre, May 13.—Information officially received by the Belgian Government is to the effect that all males between the ages of 15 and 65 in the Belgian Province of Luxembourg have been deported for work in France and Germany in the environs of the frontiers. The instructions say that the Burgomaster, cure, and notary in each commune may remain there.

A census of women also has been taken, and they have been divided into three categories. The first is composed of the able-bodied, who will be compelled to work in the fields, replacing men; the second, mothers with infants, who will be allowed to remain at home, and the third, the others who will remain at the disposition of the German authorities and whose mission is unknown. In the census no distinction has been made regarding social standing.

The foregoing Associated Press dispatch carries a meaning far deeper and more awful than is known to those who are not somewhat cognizant of the real facts in regard to the situation in the parts of Belgium and France overrun by Germany, which no American paper has yet published. Beyond all that the civilized human mind has ever been able to conceive, beyond all the hellish work that the wildest savages ever known on earth have been guilty of, beyond every depth of degradation and depravity which it is possible to conceive of in the wildest flights of imagination are the horrors which have been wreaked upon the unfortunate people, women and children especially, by a barbarism of which the record of human history shows no equal.

It is this barbarism that endangers the women and children as well as the men of this country. It is this barbarism, indescribable in its vileness, which must be defeated in Europe by our help, or else we shall have to fight it on our own shores. There is no choice for us. Germany must be defeated in Europe, or else Germany will give us in our own beloved land the same awful agonies of suffering which have been endured by the women and children and the helpless men of the captured parts of Belgium and France.

What is the explanation? In part, it is due to the fact that Germany has for years, through its universities and its philosophers, preached against the inspiration of the Bible, and because these universities and philosophers have filled all Germany and much of this country with their doctrines of false religion and have taught that might makes right. Germany slipped into barbarism—if much slipping was needed—because it had for years been slipping away from faith in the teachings of God.

Let us as a nation trust that we may be saved by quick work on the part of our country in helping the Allies from having to fight on our own shores the kind of barbarism which has so shocked and horrified all civilization. And yet civilization, except doctors and those brought directly in touch with the situation in Belgium and France, knows little of the reality of the awful depravity which has held full sway. The time will probably come when American papers will be compelled to tell more of the inside facts than have ever yet been published.

### SECRETARY LANE'S SPLENDID SUGGESTION THAT WAR QUESTIONS BE DISCUSSED AT SCHOOL COMMENCEMENTS.

**A**N interesting and important suggestion has been made by Secretary Lane of the Department of the Interior, to the effect that, in view of the war situation, all schools and universities should this year devote their commencement exercises or addresses upon subjects in one way or another relating to the world war and our connection therewith. Among the subjects suggested for discussion by Secretary Lane are the following:

#### SUGGESTED SUBJECTS FOR COMMENCEMENT DAY ESSAYS OR ORATIONS.

Belgium's Wrongs.  
Mobilization of the Nation's Industries and Resources.  
Washington's Attitude Toward War.  
The Debt of the United States to France.  
Tolstoi and the Russian Revolution.  
League to Enforce Peace.  
Specialization of Industry in War Times.  
What Russia Did for the United States in the Civil War.  
Uses of Photographs in War.  
Wealth of the United States.  
Use of Alcohol in War Times.  
Russian Methods of Co-operation.  
America's Contribution to War Machines.  
Is the Submarine a Justifiable Instrument of War for Any Other than Naval Defense?  
Lincoln in 1917—What Would He Have Done?  
War Bread—How Made.  
Value of Sacrifice to a Nation.  
How Can I Help in the War?  
A self-analysis by the individual pupil of his or her opportunities for service—gardening, scouting, etc.  
Universal Military Service.  
Education and War.  
The direct relation between education and industrial efficiency, and, therefore, between education and war.  
Autocracy vs. Democracy.  
A comparison of the Governments of the belligerents.  
The American Negro as a Soldier.  
Story of his contribution to the Army and Navy in earlier wars.  
His character as a soldier when well led.  
The Rise of Democracy Through the War.  
The Red Cross—Its History and Work.  
Our Ties with South America: What They Are and What They Ought to Be.  
The English Ideal of Liberty.  
Military Training in Public Schools.  
Women and the War.  
Aviation During the War.  
What Constitutes "Sacrifice" for the Nation.  
The Democracy of Universal Service.  
The Russian Revolution—A Forward Step in Democracy.  
Government Control of the Nation's Food Supply.  
Preparation for Peace at Close of the War.  
International League for Peace.  
American Aid to Stricken Europe—Relief Work in Belgium; Red Cross; Ambulance Service by American Universities.  
War and Thrift.  
The governmental regulations of food, fuel, clothing; what habits are likely to be carried over into ordinary life after the urgency conditions are removed; how each person can help.  
Development of the Various Sciences During the War.  
Medicine, surgery, sanitation, physics, chemistry, navigation, aviation.  
The President's Reasons for Entering into War with Germany.  
The Freedom of the Seas.  
The points involved in the submarine issue.  
America's Duty to the World's Democracies.  
The Council for National Defense.  
What It Means to the Nation.  
The National Food Problem.  
Treatment of Our Alien-Born.  
Honor in Public Service.  
How a national emergency drives out sectional interest.  
Feeding Armies.  
World Democracy.

If in every school in the land these questions can be intelligently discussed, great good will be accomplished. There is some danger that mistakes may be made in some schools by lack of information on food questions, for instance, and the reason for high prices and other problems of this kind, because a very considerable amount of matter published on these subjects is wholly erroneous; but, broadly speaking, Secretary Lane's suggestion is an exceedingly important one, and should be adopted everywhere.

Much care, however, should be exercised in a study of the subjects for discussion, in order that the real truth may be known and the facts connected

with these world problems adequately presented. Even if some mistakes be made by badly-informed scholars or other speakers, the results would be small in comparison with the almost limitless good that would be accomplished by a discussion of these most interesting suggested topics. What an illumination the whole country through college commencements will get about Belgium's sufferings, about our relation to the war and other broad questions if all of these matters can be fully handled in every college commencement, as suggested by Secretary Lane!

### THE LIBERTY LOAN WILL TEST THE NATION'S STAMINA.

**T**HE resources of a nation which owns one-third of the accumulated wealth of the world, whose wealth of raw materials is so vast as to be beyond adequate description, with a population of more than a hundred million of the most active, virile people on earth, are back of the Government's Liberty loan. There is no other security on earth so safe and sound as this loan. But more than its safety is back of it. The ability of the country to meet the great responsibility which has been thrust upon us of protecting our own national life and fighting Germany in Europe in order that Germany might not fight us upon our own shores is back of this loan.

Armies and navies would be of no value without money, the shew of war.

We must spend billions in building ships. We must finance a great army, and a great navy.

We must finance for the Allies, who for two-and-a-half years have been battling for our safety.

Behind the fleet of England we have been hiding, free from danger so long as that fleet held command of the sea; but without our help this fleet would be in danger and so we are in the contest for our own safety.

Every man, woman and child in the country is equally interested in helping to maintain this fight, for it is not a question so much of the money or the property at stake as it is the question of our own lives, and those of our families and friends. These are the things at stake.

It behooves every one, therefore, to the limit of his or her ability to contribute to this campaign by investing in Liberty bonds.

The Nation has called its people to arms; its people must meet the issue and provide the money. Each one must do his share. Are you doing yours? If not, make an investment, whether it be \$50 or \$50,000,000, whether you can pay for it in full or whether you must arrange to pay for it during the next twelve months, but do your part to the extent of your ability!

### "Hewing to the Line—Let the Chips Fall Where They May."

HENRY P. SWARTZ, Cedar Bluff, Va.

I have just read with interest the letter in your issue of May 3 written by Mr. Mark Nabors, and I say three cheers for him! Every word is to the point. I wish to say further that I have been a reader and subscriber of your valuable journal for seventeen years, and I regard it as the most substantial commercial paper published. There is no doubt but that it has been the means of advancing the South more than any other thing or cause.

You surely put up the truth without fear or favor. I believe we still have a few Judases left yet, but, thank God, the masses are with you and believe in you!

I have watched especially your prophecies and warnings as to what we will have to face, and I believe ninety-nine per cent. of them come true. The optimistic way in which you put things and the faith that you have in our country, especially the South, is well worth the price of your paper.

How any intelligent man can say that you curry favor with the North or the rich people is a mystery to me. I can see only a case of hewing to the line and letting the chips fall where they may.

## The Enormous Value in Foodstuffs of the Cotton Crop

ATTENTION has repeatedly been called in the MANUFACTURERS RECORD to the total apparent lack of appreciation on the part of the United States Department of Agriculture, or of the country at large, as to the food value in a cotton crop. It is most unfortunate that this is true, for in doing this the supreme importance to the nation of the cotton crop is being largely minimized, and the South is thus being greatly misrepresented before the public.

No one has more vigorously urged upon the South the importance of diversified agriculture, of raising more foodstuffs and more livestock, than the MANUFACTURERS RECORD. But at the same time we fully appreciate that to lessen the cotton crop to too great an extent would, from every point of view, be a national disaster.

Cotton furnishes the material which clothes the soldiers of the land. It furnishes the material for every tent on every battlefield. It furnishes an ingredient in the making of explosives for which there is no substitute. It furnishes the absorbent cotton and the bandages for the hospitals of the battlefields as well as for the hospitals in private life. It furnishes much of the material for the production of automobiles and automobile tires, the sails for ships, the clothes for the civilian as well as for soldier. But it is not simply as the clothing of the world, not as the battlefield tent to shelter the soldier, not as the sail for every ship that is still driven by the wind, but as a distinctive food crop that the country needs to adequately understand cotton.

We have thought of cotton in terms of lint only to a very large extent, and through the failure of the United States Department of Agriculture to give adequate attention to what cotton means as a food product and as a feed for livestock the country is charging the South with a failure to do its share in food production, entirely ignoring the South's great contribution to food through cotton as well as the South's contribution in the way of more than \$100,000,000 of early vegetables and fruits shipped to Northern and Western markets.

In our last issue a statement was published from Mr. C. Fitzsimmons of Columbia, S. C., illustrating some of the points in favor of cotton as a food product. For every 500 pounds of lint there is produced 1000 pounds of cottonseed, and out of this seed is made an average of 22 gallons of oil for human food. This oil also furnishes glycerine for munition manufacturers. The cake or meal from which this oil has been extracted, amounting to 400 pounds for every 1000 pounds of seed or every bale of cotton, carries over 40 per cent. protein; it can be made into bread, and, by the testimony of the best experts, it is the finest cattle feed in existence today. The short fiber from this seed goes into the manufacture of powder, and even the woody hulls are today bringing \$20 per ton as cattle feed.

These are some of the things into which cotton enters as a food product. The report of the United States Census Bureau for April 24 shows that the total amount of cottonseed received at cotton-oil mills from August 1 last year to March 31 this year was 4,330,922 tons, out of which the following products have been made:

	Produced Aug. 1 to March 31.
Crude oil, pounds.....	1,186,699,174
Refined oil, pounds.....	955,348,973
Cake and meal, tons.....	1,857,096
Hulls, tons.....	846,139
Linters, 500-lb. bales.....	1,109,106
Hull fiber, 500-lb. bales.....	318,059
Motes, grabbats and sweepings, 500-lb. bales.....	27,410

On March 31 the mills had on hand 482,066 tons, or more than 10 per cent. of the total quantity of seed purchased. The production of oil for the year will therefore considerably exceed the figures given above, and, based on the esti-

mate of Mr. Fitzsimmons—an expert long identified with the industry—of 44 gallons of oil to the ton of seed, we would have a total oil production during the present year of considerably over 1,000,000,000 pounds if all the seed should be crushed, but for the eight months covered by the census the total was nearly 1,200,000,000 pounds.

Now, the total butter production of the United States, according to the last census report, was 994,650,000 pounds on the farms of the country and 624,764,000 pounds in all the creameries, or an aggregate of 1,619,000,000 pounds. Thus this cottonseed oil, which for the amount of nutritive contained is superior to butter, amounts to more than twice the butter production in the creameries of the United States, and nearly as much as the total on farms and creameries. But in the public mind the South receives little or no credit for this great contribution to the nation's food supply. Indeed, in order to give a bonus to the butter production of the West the cottonseed-oil industry of the South is heavily taxed. Not for the revenue there is in it, but purely to give an unfair advantage to butter is this tax being put on oleomargarine, into which cotton oil so largely enters. If the Government is really, heartily, whole-souledly in favor of increasing the food supply of the country and lessening the cost, will the Agricultural Department, which has been spreading broadcast through the country criticisms of the South for not raising more food, undertake to eliminate this unjust discrimination against cottonseed oil by having the tax on colored oleomargarine removed, since this tax is not for the purpose of revenue, but for the purpose of discrimination in favor of creamery butter?

This oil production, however, is only one item in the value of the cottonseed crop as a food product. Nearly a month ago Mr. Louis N. Geldert, assistant to the president of the Interstate Cottonseed Crushers' Association, sent to Mr. Carl Vrooman, Assistant Secretary of Agriculture, a comprehensive statement of the relation of the cotton crop to the food supply of the country and to the feed supply for livestock. **In that statement it is shown that the total food and feed value of cottonseed as now handled amounts to more than \$350,000,000 a year.**

The striking statement is made—and, of course, these figures are all susceptible of proof—that the seed from a bale of cotton represents in food value more than 207 pounds of hog lard and 16 bushels of corn, or 207 pounds of hog lard and about 1650 pounds of wheat flour.

Notwithstanding this fact, the country, by reason of an official failure in Washington to adequately present this situation, has never understood the relation of the cotton crop to the nation's food supply. This letter from the Interstate Cottonseed Crushers' Association asks Mr. Vrooman to present these facts to the public, and to call attention, among other things, to the statement that **the South produces more grain value per acre in a cotton crop than is produced in the grain-growing sections of the United States per acre.**

The letter to Mr. Vrooman is so illuminating of the whole situation that we give it in full, and would ask if Mr. Vrooman has ever adequately presented these facts to the public.

Even these remarkable facts, though known to cottonseed-oil men, but not known to the general public, tell only part of the story. Mr. Jo W. Allison of the Interstate Cottonseed Crushers' Association, long intimately identified with scientific investigations on the subject, in a dispatch from Dallas to the MANUFACTURERS RECORD, published below, says that cottonseed flour is not only as healthful, palatable and appetizing as wheat flour, but that it is five times more nutritious. Mr. Allison adds that the cottonseed of an average crop used in this way would be equal to 481,000,000 bushels of wheat, or 66 per cent. of an average wheat crop.

### ENORMOUS FOOD VALUE OF COTTON CROP STRANGELY MISUNDERSTOOD.

South's 7,000,000 Tons of Cottonseed Contains  
Potential Food Value the Equivalent of  
481,000,000 Bushels of Wheat.

[Special Dispatch to Manufacturers Record.]

Dallas, Tex., May 14.

In the face of conditions that now surround the American people, and which are almost hourly becoming of more and more importance, it is apparent to even the most casual observer that the time is already upon us when this country has become the granary of the world, and to us, almost alone for some years, in peace or war, must the nations look for their food supply. The day has been when to wheat alone the world has looked for its food supply, but that day has passed, and we of the South, at least, feel that we have at command, and should put ourselves in position to offer to the world, a source of food supply hitherto almost entirely unconsidered and of an importance not at all appreciated.

The average production for the last three years of American wheat has been 728,000,000 bushels, or 21,000,000 tons, from which there could have been produced 16,000,000 tons of wheat flour.

The average production of cotton during the same

period has been 14,000,000 bales, from which there has been produced 7,000,000 tons of cottonseed.

Science has discovered and actual practical experience has confirmed that there can be produced from this cottonseed a flour not only equally healthful, palatable and appetizing as that produced from wheat, but which is more than five times as nutritious.

Considering this, then, we find that in actual nutritive value the South can contribute to the world's food supply in her 7,000,000 tons of cottonseed an amount equivalent to adding to the wheat crop 481,000,000 bushels, or something over 66 per cent. of the average wheat crop of the country.

But in addition to this, it should be noted that cottonseed flour is really in its chemical constituents, nutritive value and dietary effect more a meat than a bread substitute.

Meat contains from 15 to 20 per cent. protein—averaging about 17 per cent.—thus indicating a total nutritive value of less than one-fourth of that of cottonseed flour. In fact, cottonseed flour is twenty-five times as nutritious as potatoes, five times as nutritious as cornmeal and four times as nutritious as oatmeal.

Of even equal or more importance, in considering the value of cottonseed flour, account must be taken of its medicinal and curative effect. Persons afflicted with diabetes are prohibited from eating bread made from

wheat flour because the starch contained is poisonous to them under such conditions. Cottonseed flour contains no starch, is of exceedingly nutritive value, with a high food percentage of protein, thus making it almost an ideal food for persons afflicted with diabetes.

Keeping these facts in mind, and remembering the whole world is looking to America for its food supply, and with the actual fact staring us in the face that not only is our wheat production entirely inadequate to supply the demand of our home people, but that an actual shortage exists for the nourishment of America, and serious curtailment of this is inevitable under the terrible war conditions that are upon us now, is it not time that the people of the South should awake from the indifference that has so strangely possessed them concerning the value of cotton as a food crop, should give additional thought not only to the food value of cotton, but to that of cornmeal, peanuts and soy beans, all of which the South is capable of producing in quantities not heretofore dreamed of, and offer to her people, the nation at large and to the world the riches with which nature has blessed her in this regard?

The Master himself has said: "A prophet is not without honor save within his own country and in his own house."

May not the indifference of the Southern people to the value of cotton, cornmeal, peanuts and soy beans as a



food crop explain the indifference they have shown in this regard and the answer be "If cotton were grown in Europe as it is in Texas."

JO W. ALLISON,  
Chairman Publicity Bureau,  
Interstate Cottonseed Crushers' Association.

## BROADENING THE USE OF COTTONSEED FOR FOOD.

Bread and Cakes from Cottonseed Flour to Be Served in Senate Restaurant as a Demonstration—Importance of Peanut and Soy Bean Products Recognized by Cottonseed Crushers' Association.

[Special Dispatch to Manufacturers Record.]

Dallas, Tex., May 15.

The twenty-first annual convention of the Interstate Cottonseed Crushers' Association, now in session here, is the largest in attendance and the most interested and most interesting ever held. Delegates are present from twenty-eight States, Canada and Japan. The agricultural, food and other Government departments have special representatives, and the total attendance will be over 1000.

Changes and additions to the trading rates will be greatly in excess of other years by reason of the broadening of the association's activities in trading in peanut and soy bean products, transactions in these having during the past year increased to such proportions that the establishment and defining of grades and classes and the formulation of rules governing trades in them has become necessary. Indeed, so important has become the trading in these new products that the change of the name of the association by dropping the word "cottonseed" and calling it the Interstate Crushers' Association is being discussed, and is not improbable.

Much stress is being laid upon the growing realization of the importance of cotton as a food crop. A telegram from Senator Morris Sheppard to Jo W. Allison was read to the convention, saying that arrangements had been made for serving daily in the cafe of the Senate bread and cakes made from cottonseed flour, which, by formal action several years ago at an annual convention, the association had named "Allison flour."

A letter was read from Congressman J. P. Buchanan of Texas, indicating that he would immediately, in the interests of conserving the grain supply, take the necessary steps to have two pounds of cottonseed meal substituted for four pounds of grain in the daily ration of every horse and mule in Government service of any kind, it being claimed that this would serve the double purpose of cheapening while improving the ration, and in addition make an enormous saving in the amount of grain consumed, and thus release for other purposes.

The report of the legislative committee dealt largely with its work in the matter of oleomargarine legislation and made an interesting demonstration of the entire healthfulness and palatability of oleomargarine, showing that Holland, the largest pure butter producing country in the world, consumed thirty-five pounds annually of oleomargarine per capita as against less than three pounds per capita in the United States, and that the abolition of the oleomargarine tax and the removal of several of the more burdensome restrictions surrounding its manufacture would give the people cheaper, better and more healthful cooking fat than was now accessible to them.

Judge F. H. Ramsey of the Federal Reserve Bank at Dallas, delivered an interesting address dealing with the difficulties of financing an oil mill with the present abnormally high prices of cottonseed, and explained the Government's willingness to be of every possible assistance in that regard.

Elaborate entertainments were provided for the ladies attending the convention, including a luncheon at the Dallas Country Club, and for the delegates in an extensive barbecue of the Armstrong packery, but the principal time of the convention is given to very serious and important business. Even the evening entertainment given at the Scottish Rite Cathedral last night, where an elaborate musical program with an ad-

dress by M. M. Crane, with response by George W. Covington, president of the association, was given, was of a most serious, dignified and patriotic character.

## FOOD VALUE OF SOUTH'S COTTON CROP IMPRESSIVELY PRESENTED.

More Grain Value Per Acre Than Is Produced in Corn-Raising Section of the Country, Says Authority—Conditions Food Conservationists Have Largely Overlooked.

The unappreciated and generally unknown facts as to the food value of the cottonseed annually produced in the South—to the amount of some 6,000,000 tons in a 12,000,000-bale crop—are comprehensively set forth in a letter to Carl Vrooman, Assistant Secretary of Agriculture, given herewith. The letter, which follows, is by Lewis N. Geldert, assistant to the president of the Interstate Cottonseed Crushers' Association, and is therefore an authentic presentation of the case. It is necessary to know these facts in order to understand the part the South plays as a contributor to the national volume of food supply, and Mr. Geldert's letter should be given fullest consideration by those who are seeking the greatest possible conservation of the food crops the nation produces.

### INTERSTATE COTTONSEED CRUSHERS' ASSOCIATION.

Office of Assistant to the President,  
Porter Building, Memphis.

April 19, 1917.

Hon. Carl Vrooman,

Assistant Secretary of Agriculture,  
Washington, D. C.:

Dear Sir—In compliance with your personal request, I affords us pleasure to present to you, in this formal manner, the ideas and conclusions of the cottonseed crushers, as expressed at their meeting held in Memphis, Tenn., on Saturday evening, April 7, 1917, concerning the opportunity and the necessity for conserving and increasing the corn and other grain products of the South.

In view of the extreme gravity of the situation, we respectfully urge you to consider having the facts and figures herein embodied brought to the immediate attention of the farming population of the country, and particularly, perhaps, advising the owners of farm animals to adopt the suggestions presented for reasons both economic and patriotic.

It is not generally realized that the cotton plant provides large quantities of food as well as raiment. The South is not so poor in food production as alarmists would have us believe, as the ginning of 11,500,000 bales of cotton fibers leaves 5,575,000 tons of seed, which produces three distinct food or feed products in quantities and at present market prices as follows:

Oil, 225,000,000 gallons, @ \$1.....	\$225,000,000
Meal, 2,787,500 tons, @ \$40.....	111,500,000
Hulls, 1,115,000 tons, @ \$15.....	16,725,000
Total food and feed value.....	\$354,725,000

In addition, there is provided by the above cotton crop 1,672,500 bales of lint, which are considered essential in the making of smokeless powder and gun cotton, and which at the present market price of \$35 per bale amounts to \$58,537,500. Adding to the above the cotton fiber at 20 cents a pound, it will be noted that the Southern cotton planter has in one season added to the nation's wealth \$1,563,262,500, of which approximately 74 per cent. was available for clothing, 23 per cent. as food for man and beast, and 3 per cent. for munitions of war. Other comparisons might be made, but to the superior advantage of the cottonseed must be credited the fact that its food value is far in excess of corn and other grains, and that the protein value of cottonseed meal is two and one-half times that of corn.

An analysis of the food values into which cotton is divisible, made by Col. Jo. W. Allison, is to this effect: Taking 1600 pounds of seed cotton (the basis for a bale of lint cotton), there is left 1000 pounds of cottonseed after ginning. This will yield about 20 gallons of crude oil and 18.5 gallons of refined oil, which makes 139 pounds of refined oil, and which is equal in food value to 207.5 pounds of hog lard. These seed also yield about 550 pounds of cottonseed meal, equaling in food value 900 pounds of corn, or 16 bushels of corn. Or, instead of the meal, this can be converted into 300 pounds of cottonseed flour, equaling in food value about 1650 pounds of wheat flour. There will also be about 250 pounds of hulls, and, of course, the lint cotton and linters, which have no food value, but go into cloth, ammunition, etc.

In other words, the seed from a bale of cotton represents in food value 207.5 pounds of hog lard and 16 bushels of corn, or 207.5 pounds of hog lard and about 1650 pounds of wheat flour.

Of the pure food provided by cottonseed oil, in lard compounds, margarine and other refined edible oil products, no more need be said here. Is there not danger, however, of stampeding the Southern farmer into such neglect of

cotton planting this year, by the plant-food-crop propaganda of the Government, as will result in an alarming shortage of this valuable crop, which is in itself such a composite of diversification?

A word of caution from your department now, before planting is too far advanced, might prevent disaster. There are hundreds of thousands of acres of Southern lands, particularly adapted to cotton, which, by intensive methods, would produce a bale or more an acre, but which, under the spur of the preparedness campaign, are being planted this year in other food crops, concerning the growing of which the laborers have no knowledge or experience. Elsewhere in the same States, perhaps, are large areas of land better suited to corn, other grains and vegetable crops.

The money crop of the South is cotton, and in its abundance of wealth production the whole country has shared. We would respectfully sound a word of caution lest the layer of the golden egg be killed or seriously injured.

But the suggestions that we have offered and those we are now submitting for your careful consideration are directed more toward accentuating the need of putting to the very best possible use such food as we may produce, and with this idea in mind we trust that what we are about to offer will throw some light upon the subject and prove of real worth.

Of the elements essential for plant growth, nitrogen is the one most often lacking. While the up-to-date farmer some time ago learned that one way to restore this element to the soil is by growing and turning under leguminous crops, he is just beginning to realize and to appreciate THAT THERE IS ONE PRODUCT AND ONLY ONE WHICH CAN BE USED AS A FEED WITH THE MAXIMUM RESULTS, AND, AFTER HAVING BEEN FED, RETAINS IN THE MANURE 80 PER CENT. OF ITS ORIGINAL FERTILIZING VALUE. THIS UNIQUE PRODUCT IS COTTONSEED MEAL. AND THERE IS NO OTHER ARTICLE UNDER THE SUN THAT WILL GIVE SUCH SPLENDID RESULTS AS BOTH FEED AND FERTILIZER. While nitrate of soda and tankage, if of high quality, will produce as good results as fertilizers, they are worthless for feeding purposes.

Let us be accused of allowing our self-interest to obscure and distort our presentation of this subject, we shall support our contentions as to the dual value of cottonseed meal by quotations from State and United States experiment-station reports and bulletins.

In order that a comparison may be drawn of the relative feeding values of the best-known horse, mule and cattle feeds, the following table is taken from Bulletin No. 106 of the North Carolina Experiment Station, "Rational Stock Feeding":

### DIGESTIBLE DRY MATTER AND NUTRIENTS IN ONE POUND OF FEEDING STUFFS.

Food.	Dry matter.	Total protein.	Carbo-hydrates.	Fats.
Raw cottonseed.....	.5453	.0983	.2792	.1688
Cottonseed meal.....	.6763	.3405	.1253	.0919
Wheat bran.....	.5192	.1197	.3084	.0282
Cornmeal (for cow).....	.7129	.0532	.5916	.0361
Cornmeal (for horse).....	.780	.0809	.6515	.0302
Oats.....	.597	.0904	.4795	.0342

United States Department of Agriculture, Farmers' Bulletin No. 151, does not hesitate to declare that, after exhaustive tests, it considers cottonseed meal not only the most economical, but the very best grain feed that can be used by Southern dairymen. Permit us to quote therefrom as follows:

"Cottonseed meal is the cheapest and best grain feed which Southern dairymen can use, containing as it does from 40 to 45 per cent. protein, the element most needed in the production of blood, muscle and milk. It is the cheapest grain feed we have and one which cannot be wholly replaced at an equal expense by any other feed. It contains more than four times the amount of protein found in corn meal, nearly three times as much as in wheat bran or shorts, and double the amount in pea meal or malt sprouts. Cottonseed is used to some extent in feeding, but has proven less satisfactory than the meal. It is worth about one-half its weight in meal, but it contains such a large amount of oil that it must be used with great caution."

Bulletin No. 125 of the United States Department of Agriculture, entitled "A Digest of Recent Experiments on Horse Feeding," is almost equally enthusiastic as to the value of cottonseed meal for horses and mules. It expresses the views of its experts as follows:

"Horses were fed 2 pounds of cottonseed meal per head daily as a part of a mixed ration. When the amount was increased to 3½ pounds the results were not as favorable. In the opinion of Dr. Stubbs of the Louisiana Station, cottonseed meal may be fed with satisfactory results to horses and mules. At the Louisiana stations one or two pounds per mule per day have been fed with success. Six pounds is regarded as the maximum quantity which it is desirable to feed."

Many of the State experiment stations have made similar tests, and while special limitations will not permit of long or numerous quotations, we should like to attract your attention to the following conclusions arrived at by the scientists in charge of some of these investigations. It will be noted that there is not only unanimity in crowning cottonseed meal as the queen of all feeds and fertilizers, but in awarding that golden-hued product first place for cheapness and efficiency.

Bulletin No. 106, issued by the Kentucky Agricultural Experiment Station, on "Feeding Dairy Cows," tells us in the following words how effective it is:

"In comparison with bran as feed for cows on pasture the cottonseed meal gave, pound for pound, the largest returns. Substituted for a part of the corn in the ration, or fed in comparison with corn in the ration, cottonseed meal

gave, pound for pound, the highest returns as compared with bran."

Bulletin No. 117, South Carolina Agricultural Experiment Station, "A Comparison of Wheat Bran and Cottonseed Meal for Milk Production," is just as laudatory, as will be observed from the ensuing remarks:

"An inspection of the table clearly reveals the superior feeding value of cottonseed meal for milk production. The substitution of one pound of meal for two pounds of bran not only maintained the average daily butter fat and production, but actually increased it. A ton of cottonseed meal has not only twice the practical feeding value of a ton of bran, but has also twice its fertilizing value."

Bulletin No. 131, South Carolina Agricultural Experiment Station, on "Cottonseed Meal and Corn Silage as Ration for Dairy Cows," is of the opinion that:

"Cottonseed meal and corn silage form by far the cheapest feeding value to our dairymen. The cost of such a ration is only slightly more than half as much as that of the common dairy ration now fed in this State."

What the Virginia Agricultural Experiment Station experts think of cottonseed meal is expressed in their Bulletin No. 156, entitled "Gluten and Cottonseed Meal with Silage, Hay and Stover for Dairy Cows":

"Cottonseed meal, as all recognize, is a foodstuff very rich in digestible protein and fat; in fact, unless adulterated, the most concentrated meal obtainable on the markets. If judiciously fed, no more valuable concentrate can be had. It has positively no injurious effects upon the productive powers when rationally utilized, while it has a decidedly stimulating effect on the yield of milk and butter fat."

To the most skeptical and unbelieving the facts and figures given below must carry at least some weight as to the financial wisdom of using cottonseed meal to feed steers. Bulletin No. 76 of the Georgia Experiment Station, on "Feeding Tennessee Steers in Georgia," relates this interesting and instructive experiment:

"The results, therefore, indicate that cottonseed hulls are better as roughness to combine with cottonseed meal and bran than either shredded fodder or combination of shredded fodder with corn silage or corn rye. While the chemical analysis and digestion trials show that cottonseed hulls contain less digestible matter than shredded fodder, yet there seems to be something in the combination of the hulls with cotton meal that produces better results than the analyses indicate."

"The average gain of steers on one-half cottonseed meal and one-half corn was 1.75 pounds per day. The average gain of steers on one-third cottonseed meal and two-thirds corn was 1.89 pounds per day. The combination of cottonseed hulls with cottonseed meal and bran produced larger gains at a lower price per pound than when either shredded fodder or shredded fodder and corn ensilage or green rye was used with the same concentrates. The gain by feeding cottonseed hulls was 2.64 pounds per day. The average cost was 5.39 cents per pound of gain; the gain on shredded fodder was 2 pounds per day, average cost 8.05 cents per pound of gain. The gain on shredded fodder and ensilage or rye was 2.09 pounds per day; average cost 8.68 cents per pound of gain."

If the incredulous need further data, we have but to refer to Bulletin No. 82, issued by the New Hampshire College Agricultural Experiment Station, "Feeding Farm Horses," which presents a number of different rations and the cost thereof. While these experiments were made when all feeds were much lower in price than they are now, cottonseed meal then was awarded first place, as it must today, as the most economical feed.

Having proved our assertion that cottonseed meal is the most effective and cheapest feed for all classes of animals, we shall now endeavor to enlist governmental support of our assertion that after having been fed it still possesses, in the form of manure, 80 per cent. of its original fertilizing value.

Bulletin No. 81 of the North Carolina Experiment Station, entitled "Feeding Cottonseed Hulls and Meal for Production of Beef," wastes no words in reaching this conclusion. It says without equivocation:

"Approximately 80 per cent. of the fertilizer ingredients in the food can be recovered in the manure. It is, therefore, safe to say that the manure will pay all the expenses of caring for the animals."

Bulletin No. 128 of the South Carolina Experiment Station, entitled "Stock Feeding," shows, in dollars and cents, the superiority of cottonseed meal excreta over manure made from grain. It says:

"The table shows that the fertilizing value of a ton of cottonseed meal exceeds that of a ton of corn by \$17.30, an amount that certainly must appeal to the man who is dairyming on a business basis."

How effective in producing crops the nitrogen in cottonseed meal has proven to be is well stated in Bulletin No. 46 of the Arkansas Agricultural Experiment Station, entitled "Experiments with Manures and Rotations for Improving Worn Cotton Soils," in which these instructions are given:

"When necessary to have nitrogen the Arkansas farmer should always buy it in cottonseed meal, for the reason that it is by far the cheapest and most desirable form in which he can buy nitrogen. In addition to this, his consumption of cottonseed meal increases the market for his cottonseed, and the money paid for them remains in his neighborhood instead of going to other distant regions, as it does when nitrogen is bought in other forms. The nitrogen in cottonseed meal is sufficiently available for immediate use and needs of all staple crops. It is liberated very quickly in the soil with proper temperature and moisture, but it becomes available gradually and is consumed by growing crops, and is not leached as it is when applied in a readily soluble form."

Bulletin No. 183 of the North Carolina Experiment Station, headed "Feeding Farm Horses and Mules," indicates

how desirable it is to substitute cottonseed meal for a part of the grain ration. It says:

"Cottonseed meal can be used to displace a part of the corn or oats in the horse or mule ration. Two pounds of cottonseed meal as a part of the daily ration were fed to horses and mules with satisfaction. In comparison with other feeding stuffs, cottonseed meal, because of its high feeding value, is a relatively cheap feed."

That there are millions of bushels of corn consumed by horses and mules that could be used to greater advantage by human beings, and the animals from which the corn is taken could be better cared for on cottonseed meal, is emphatically asserted by Dr. Tait Butler, the able editor of the Progressive Farmer and for many years secretary of the Southern Cattle Growers' Association. Subjoined is a statement prepared by Dr. Butler for the press, which is enthusiastically endorsed by the following named scientists: Dr. E. R. Lloyd, director of the Mississippi Experiment Station; Dr. H. A. Morgan, director of the Tennessee Experiment Station; Dr. W. C. Lassiter, director of the Arkansas Extension Forces, and Mr. H. M. Cottrell, agriculturist, E. M. C. Farm Bureau. Dr. Butler tells us that:

"There are in the eleven cotton States 6,500,000 horses and mules. If each of these were fed two pounds of cottonseed meal per day, it would release four pounds of corn each day, and 200 days of such feeding to all horses and mules would release 100,000,000 bushels of corn for human food, and the mules and horses would be benefited by the change."

"Four pounds of corn at \$1.55 per bushel costs 11 cents. Two pounds of cottonseed meal at \$40 per ton costs 4 cents."

"The feeder would thus save 7 cents per day, or \$14 for 200 days, on each head of stock."

Thus would be effected a saving of \$91,000,000 in 200 days in eleven States alone. Is not a saving of this magnitude worthy of careful consideration, especially when "the mules and horses would be benefited by the change"? And does it not place cottonseed meal in a class by itself as an economical feed?

We are first approaching the point where expediency demands the utilization for animal food of every product derived from grain and seeds, otherwise the inevitable result will be still higher prices for both human and animal foods. Dr. Armby, an eminent authority on questions of nutrition, says in effect that our cereals must eventually be used for human food, and that we must use the by-products or waste materials exclusively for animal foods, when he makes the statement:

"As the demand for human food increases \* \* \* he (man) will be compelled to turn more and more to the by-products and utilize them as a food producer, as a means of utilizing the stored-up energy and protein which otherwise will go to waste."

The following instructive and self-explanatory experiments are recounted by Mr. B. F. Taylor of Columbia, S. C.:

"In 1905, 1906 and 1907 Mr. E. B. Boykin of the Department of Agriculture, under the direction of the Department of Agriculture, conducted certain experiments near McColl, S. C., for the purpose of ascertaining the comparative value of cottonseed meal and cottonseed when used directly in the soil as a source of fertilizer for cotton. The results of those experiments were published in a bulletin by the Department of Agriculture, the title of which, we think, is 'The Comparative Value of Cottonseed and Cottonseed Meal as a Fertilizer.' This question involves much of practical importance to the farmer."

"When the experiments were started, Mr. Fletcher, who has direct charge of the work, believed absolutely that the seed used as a fertilizer was the one and only method, and he never sold or exchanged a bushel of seed, but used them on his own land. After three years of careful experiments, Mr. Fletcher was absolutely convinced that the use of meal is preferable both as to increased yield and for the further important consideration that it includes the permanent improvement of the land."

"I now quote the results of these experiments:

1905.		Yield in lbs. seed cotton.
Acre No. 1:	450 lbs. cottonseed meal, 600 lbs. acid, 150 lbs. kainit.	2,112
Acre No. 2:	30 bus. cottonseed, 600 lbs. acid, 150 lbs. kainit.	1,905
Acre No. 3:	600 lbs. cottonseed meal, 800 lbs. acid, 200 lbs. kainit.	2,059
Acre No. 4:	40 bus. cottonseed, 800 lbs. acid, 200 lbs. kainit.	1,857
Acre No. 5:	300 lbs. cottonseed meal, 400 lbs. acid, 100 lbs. kainit.	1,742
Acre No. 6:	20 bus. cottonseed, 400 lbs. acid, 100 lbs. kainit.	1,615

1906.		Yield in lbs. seed cotton.	Yield in lbs. seed cotton.
Acre No. 1:	450 lbs. cottonseed meal, 600 lbs. acid, 150 lbs. kainit.	1,343	1,337
Acre No. 2:	30 bus. cottonseed, 600 lbs. acid, 150 lbs. kainit.	1,346	1,320
Acre No. 3:	600 lbs. cottonseed meal, 800 lbs. acid, 200 lbs. kainit.	1,396	1,340
Acre No. 4:	40 bus. cottonseed, 800 lbs. acid, 200 lbs. kainit.	1,318	1,371
Acre No. 5:	300 lbs. cottonseed meal, 400 lbs. acid, 100 lbs. kainit.	1,133	1,011
Acre No. 6:	20 bus. cottonseed, 400 lbs. acid, 100 lbs. kainit.	1,084	1,073

"In 1907, the last year, the six acres included in these experiments were cultivated with no fertilizers, and here, as in all other experiments, the cottonseed meal as a fertilizer came out substantially ahead in the competition. In other words, in every test the cottonseed meal gave larger yields and did better also as to the permanent improvement of the land."

"The seasons had something to do with the case, of course, as did also the cultivation."

"In 1904 the land was planted with peas, and this materially helped the value of the crop in 1905. The 1906 crop

followed after a cotton crop, and this was a very wet spring. In addition, the cultivation did not altogether suit him in that year; it was plowed too deep, which injured it at the time it began to fruit. In the last year, 1907, when no fertilizer was used, the work was done in the best style possible. Mr. Fletcher made on his own lands, with no special experiment during that year, 24 bales of cotton from 16 acres."

"It is interesting to note, in connection with the experiments made by Mr. Fletcher, under the direction of Mr. Boykin, that he now owns and operates an oil mill on his own farm for the purpose of crushing his own seed, and, during the past year at least, bought no seed except such as he might buy from his tenants on his own place."

Bulletin No. 46 of the Arkansas Agricultural Experiment Station shows the value of commercial fertilizers, cottonseed meal and barnyard manure for cotton on soil after two crops of cotton. The soil in 1894 grew cotton with fifteen two-horse wagon loads of barnyard manure per acre. In 1895 it grew cotton without manure. In 1896 it grew cotton with the following fertilizers:

Plots.	Yield seed cotton per acre, Pounds.
No fertilizer.	922
Nitrate of soda, 300 lbs. 16 per cent.	1,145
Muriate of potash, 300 lbs. 49 per cent.	950
Acid phosphate, 300 lbs. 14 per cent.	960
Gypsum, 500 lbs.	852
Cottonseed meal, 400 lbs. 6 per cent. nitrogen.	1,080
Kainit, 400 lbs. 13 per cent.	840
Barnyard manure, good quality, 10 two-horse loads	1,122

"A similar experiment was conducted for corn. The soil grew peas in 1894, cotton in 1895, and fertilizer corn experiments in 1896. The cotton stalks were cut and turned in the fall of 1895."

Plot.	Yield corn per acre, Bushels.
No fertilizer.	20
Barnyard manure, 10 two-horse loads.	26
Gypsum, 500 lbs.	14
Muriate of potash, 300 lbs. 49 per cent.	13
Nitrate of soda, 300 lbs. 16 per cent.	32
Kainit, 400 lbs. 13 per cent.	15
Acid phosphate, 300 lbs. 14 per cent.	19
Cottonseed meal, 6 per cent.	29
No fertilizer.	21

"It will be noted that the soda nitrogen crop has much more nitrogen than the cottonseed meal nitrogen plot. In these experiments the soda nitrogen cost \$4, while that of cottonseed meal cost \$3.80."

Notwithstanding the certainty of results, and despite the efforts of State and Federal agronomists to induce farmers to get the utmost out of the cottonseed meal by using it first as a feed and then as a fertilizer, they are but slowly awakening to its dual possibilities, as might be instanced in the great State of South Carolina.

In that State there are annually produced from the cottonseed sold to the oil mills approximately 200,000 tons of cottonseed meal. This cottonseed meal, on account of its high content of protein, fat and carbohydrates, is considered by feeding authorities to be worth two and one-half times as much as the same quantity of corn as a feed for farm animals. This, therefore, is equivalent to 500,000 tons of corn, or approximately 18,000,000 bushels. Having within her borders such a vast quantity of feeding material, the natural assumption would be that it was used for feeding purposes. But no; this is not the case. Her farmers, through ignorance, indifference and perversity, prefer to bury this rich feedstuff in the ground and import a far greater quantity of other materials to take its place.

What an unconscionable thing it would be considered if the farmers of Belgium, Germany, France or England were annually to bury 18,000,000 bushels of corn in the ground for fertilizing purposes instead of using it as a food for man and beast! Yet in one State alone we are interesting the equivalent of 18,000,000 bushels of corn every year.

The above figures represent only South Carolina's waste. All of the cotton States occupy a similar position, except possibly Texas and Oklahoma, where the meal is largely sold for export beyond the borders of those States and used as a feed. Few people realize that the cotton crop is a grain crop, and that for every bale of cotton made there is made at the same time about 450 pounds of cottonseed meal, which is equivalent to about 1125 pounds of corn in feed value. We produce more grain value per acre in a cotton crop than is produced in the corn-raising section of the United States. It is discouraging to see our farmers sell their cottonseed for cash and not buy back the meal for use on their farms. It is a common practice among the oil mills to give an exchange of meal for seed that is greatly to the advantage of the farmer if he is going to use the meal. It is not necessary to take an unofficial source for the confirmation of these figures. The United States Government, all experts on feeds, any chemist and every State department of agriculture, as well as every experiment station, will confirm the information given herein.

For further information concerning the claims for cottonseed meal and various phases of the subject, having more or less bearing in this connection, we would refer you to the correspondence with Mr. Lehman Johnson, analytic chemist, Memphis, on file in your Department. Having shown the necessity for larger and better crops, and for their conservative use after harvesting, and having substantiated, by the highest agricultural authorities in the land, that cottonseed meal stands unrivaled as the greatest feed-fertilizer known to man, may we not ask your earnest co-operation in placing this information before the public in such a way that every farmer will be impressed with the twofold uses to which he can put this matchless product of the South?

In requesting you to disseminate this knowledge, we are not actuated by selfish motives, but by the sincere desire to see every farm in this broad land of ours produce its



maximum crops at minimum expense. We want to help make this the most fertile and the most productive country under the sun, and this end can be attained only when farming is done in an efficient and profitable manner, so that the farmer shall receive just recompense for his labors, when work and worth go hand in hand. We want to see our countryside filled with happy homes, with fire-sides of content; and it is given to you, Mr. Assistant Secretary, more than to any other living man, the opportunity to bring about this happy and contented condition. May you continue your splendid work in the same enthusiastic, intelligent and helpful spirit that you have shown in the past, and may your light beam broader and farther as added knowledge is given to you to guide and assist those who still grope and stumble in the dark.

We eagerly await your advice that you have considered this communication in its all-important phases and are prepared to take it up with the division chiefs of the department under whose jurisdiction it would naturally come. A special committee of our association will meet with you at your office whatever date you may designate. Considering the importance of prompt action, I would be glad to receive a wire from you indicating your desires in the matter.

Yours very respectfully,

THE INTERSTATE COTTONSEED CRUSHERS' ASSOCIATION,  
(Signed) LOUIS N. GELBERT,  
Assistant to President.

### Mississippi Being Aroused to the Necessity of Utilizing Hitherto Unfamiliar Foodstuffs.

Jackson, Miss., May 12—[Special.]—If Mississippians respond to the request of their Governor, this State will be the first in the South to feel the war at its tables. Governor Theo. G. Bilbo has issued a proclamation calling upon every household in the State to observe one meatless and one flourless day a week.

The Governor issued his proclamation upon his return from Washington, where he attended a meeting of the National Council of Defense. He said the people of the South were not half-awake to the gravity of the war situation, and he expected to devote much of his time the next few weeks to making them realize what a task is before the country.

The proclamation urged conservation of all foods, the elimination of waste, the canning and drying of fruits and vegetables this summer, and the making of preparations for a two years' war at least, with five years of hostilities as a possibility.

All elements in Mississippi are united in the campaign for increased food production. Canning clubs of housewives are being organized all over the State, canning factories are being started, bankers are buying cans for the canning club girls by the car lot, and the State is bending its effort at present to providing means for caring for the surplus of foodstuffs, which promises to be the greatest in the history of the State.

Soy-bean meal will furnish a large part of the diet of Mississippians this fall, unless the wheat crop is much larger than it is expected to be, and county home economic agents are making biscuits from the meal, as well as other breads, and even tasty cookies.

Velvet-bean meal is also good for human consumption. Practically every corn field in the State has either velvet beans, soy beans or cowpeas planted with the corn, and the yield will run into the millions of bushels, so that Mississippians do not expect to go hungry, even if their tables do bear some hitherto unknown foods.

### Cape Fear Meat-Packing Plant.

Ten head of cattle and 300 hogs will be the daily capacity of the meat-killing and packing plant which the Cape Fear Packing Co., Wilmington, N. C., will build at Navassa, near Wilmington. Organization has been effected with a capital of \$200,000 and the following officers: G. Herbert Smith, president; M. J. Corbett, vice-president; Walter H. Griffith, secretary-treasurer; directors, Messrs. Smith, Corbett, Griffith, Hugh MacRae and A. M. Chinnis, all of Wilmington. This company's general plans have heretofore been announced, and it will soon call for construction and machinery bids. Its building will be a four-story-and-basement 180x60-foot reinforced-concrete structure, expected to be completed by November 15, to be equipped with machinery for employing 60 men. Plans and specifications will be completed by June 10, Wilson & Sompayrac of Columbia, S. C., being the architects. W. E. Washington of Chicago, packing-house engineer, is associated with the architects in an advisory capacity.

## The Railroad Question Scientifically Stated

By CHARLES CATLETT, Chemist and Geologist, Staunton, Va.

To the layman the question of railroad rates is shrouded in mystery and absurdity and unfairness. But these conditions are not confined to any particular section of the country. How absurd it must be to ship freight entirely across the continent, right by the doors of many factories, until it reaches the coast, and then ship it back again locally to these places, because it can be done cheaper than to start material in the East and stop it at these places! Yet the law and the Interstate Commerce Commission will not let the roads change these conditions.

My work has brought me up against a number of railroad rate problems, and while I have had nothing to do with the traffic conditions, I have not infrequently come across the cases where the roads themselves were anxious to make lower and better freight rates, but they were prevented either by the law or because to do so would overturn all sorts of other rates which in themselves might be improper but which were so interwoven with the development and the industries and the prosperities of many places that they could not be arbitrarily changed.

Granting these facts; granting that in the past many rates were put in which were not based upon sound considerations, nevertheless there have been built up on these rates communities and industries which cannot properly now be sacrificed. And while there are all

sorts of things which can and which should be corrected, there are many unfair, unjust and discriminatory rates which will never be corrected because to correct one injustice would be to perpetuate a greater injustice.

Broadly, the roads of this country have given the cheapest service in the world. Broadly, the country has developed as no other country has developed, and broadly, the railroads have been an essential factor, if not the greatest factor, in this development. The country has by law increased the cost of operation. The country has by law decreased the income of the roads, and now the natural law of supply and demand, quickened by a world-wide catastrophe, has suddenly, almost over night, added an enormous cost to the operating charges of every single road in the country, without distinction, at a time when those roads are asked in the interest of our civilization to give an effort, an efficiency and a service greatly in excess of what they have ever been called on for before.

It makes no difference what are the injustices which have been and are being perpetrated by the railroads, and which we hope in time will be corrected, but today, in your interest and in mine, and the interest of our civilization, the thing to do is to give them promptly such assistance that they can measurably arise to the present emergency, and if we do not, we are simply destroying ourselves because of a revengeful feeling for past injustices.

### DANGER IN DISCOURAGING PRODUCTION OF COTTON.

Unfavorable Conditions May Make It Impossible to Produce Crop Sufficient for Even Urgent Necessities.

By W. B. THOMPSON, New Orleans, La.

The present situation demands the best thought of the most level-headed men. Prone as the American people are to extravagance, both in thought and act, and dominated as they are by generous emotions, there is some reason to fear that they may, under the urge of patriotic precepts, conserve their resources and efforts to the point of constriction. Converts are generally radical and oftentimes fanatical. It is to be hoped that the Government will not encourage or permit the people to turn abruptly from wasteful extravagance to extravagant economy. Still more is it to be hoped that authority will not, by its expression or application of the patriotic theorem, do anything which may discourage enterprise and productivity. Of course, the precepts of conservation and frugality should be taught and enforced, but it should at the same time, and all the time, be borne in mind that the nation at war is best sustained by busy patriotism working for love of country and personal profit, and is worst supported by subjective patriotism alone, looking out upon a future of loss and privation. If this country is to handle itself bravely and effectively in the coming struggle, the first thing we should do is to encourage those forces which make for industrial activity and productive effort, and the last thing we should do is to emasculate these forces.

Passing from these generalizations to consideration of the case of cotton:

It is apparent that a determined effort is being made by certain interested individuals to work up some sentiment against the cotton producer on account of alleged excessive profits to the end, presumably, of securing some legislative action or executive expression which would have the effect of reducing prices.

Next to foodstuffs, cotton is the most important

product to the nation, whether it be at peace or war. The surplus reserve of cotton is negligible. It is imperative that at least a moderate crop be produced.

All living expenses must be considered in estimating the producer's profit. All these expenses have increased enormously. In many instances and sections these expenses have increased from 100 to 300 per cent. Because of the extensive and still extending activity of the boll-weevil, the scarcity and still increasing scarcity of labor, and the shortness of supply and depreciation in quality of fertilizers, the productive capacity of the cotton farm in respect to yield has been reduced and in respect to acreage is menaced. I do not undertake to give the exact percentage of the farmer's profit under these circumstances. I am unable to supply an accurate estimate in figures. Some economists are giving exact figures. Figures do not lie, themselves, but they can be made to lie like the devil. The fact remains, and is demonstrated by actual experience, that the cotton producers have not made any excessive profit this year, but only a reasonable remuneration after some ten lean years. Confronted as the cotton producers are with an unpropitious season so far, with the prospect of still further advances in costs and still greater exaggeration of difficulties in production, it is my opinion that if, in addition, there should be a decline in prices, or even a fear that prices would not be permitted to advance in step with cost increases in the several items of production, it will be impossible to produce enough cotton to supply even the urgent necessities.

It is, therefore, most advisable, from the standpoint of good to the public as well as of justice to individual producers, that the Government be not misled by the misstatements of designing parties selfishly interested in depressing prices, or by any other misunderstanding, into taking steps or giving expression to any policy which would have the effect of curtailing production or discouraging the producer from doing his best.

Additional new machinery costing \$35,000 has been ordered and will be installed by the Hicks Hosiery Mill, Talladega, Ala., to replace present equipment. The mill's daily capacity will thereby be increased from 300 to 1000 pairs of hose.

# How Railway Congestion May Best Be Relieved

INCREASED LOCOMOTIVE POWER AND ADDED TERMINAL FACILITIES  
RATHER THAN MORE CARS FAVORED BY PRESIDENT JOHNSON OF  
NORFOLK AND WESTERN.

Norfolk & Western Railway Co.,  
Office of the President.

Roanoke, Va., May 12.

Editor *Manufacturers Record*:

In the matter of the Government building cars and engines:

It has been stated in many different ways recently that the Government requires only one-tenth of the capacity of the steel operations. It is true that the Government and the railroads require the same class of material to a very great degree, namely, plates. The Government wants plates for shipbuilding and the railroads want plates for boilers, cars and tanks, and I think it is up to the committee which has recently been appointed and of which Judge Gary is the chairman to see that this class of material is pro-rata divided between the requirements of the Government and the requirements of the railroads. If the Government takes all of this class of material and leaves none for the railroads, then there will be such a shortage of equipment that the carriers cannot take care of the requirements of the Government. On the other hand, if there is a pro-rata division of this class of material, there will be no difficulty whatever in private institutions joining with the railroads themselves in meeting the requirements of equipment to meet any demands that may be put upon the carriers.

I am not at all in sympathy with the thought that the Government will have to provide money for mobilizing a system of car building to meet the situation. The car builders, locomotive builders and the railroads themselves are in condition to build equipment much more rapidly, much more effectively and much more efficiently than could a Government-operated plant.

## TO MAKE PAPER PULP FROM BAGASSE.

Will Also Utilize Cotton Stalks and Rice Straw  
and Turn Out Various By-products—New  
Industry in Louisiana to Begin Operations  
in Fall.

New Iberia, La., May 12—[Special.]—The new pulp mill that is being constructed at New Iberia by the Sugar-Cane By-Products Co. of Philadelphia, Pa., will begin operations in September or October, it is now announced. The buildings have been practically completed, but the arrival of the machinery has been delayed by the car shortage. Some of the machinery has been ready for delivery since February, but the railroads have been unable to move it.

The mill is designed to manufacture pulp from bagasse, cotton stalks and rice straw. From these it is proposed further to extract denatured alcohol and several other by-products. The plant will have a capacity of 35 tons of pulp daily, and it is so constructed that two more units can be added, thus increasing the capacity to 105 tons daily. Later a paper-making machine may be added.

The company has purchased a tract of 18 acres of land, located on Bayou Teche, with Southern Pacific and Frisco Railroad connections, furnishing ample water and rail facilities as well as room for enlargement.

Experiments with bagasse, cotton stalks and rice straw have demonstrated, it is claimed, that they will yield by-products that will be about as valuable as the pulp. The management is not yet ready to announce the nature of the by-products, except denatured alcohol.

A baling machine has been invented for baling cotton stalks, and many tons have already been stored in the warehouses. Tests show, it is stated, that the rice straw can be converted into pulp within an hour and a half, and that it will produce paper of the best grade. The pulp output of the plant will be shipped to paper mills in the North.

The mill will not undertake to make pulp from saw-

What is required, in my opinion, is for the Interstate Commerce Commission to as promptly as possible authorize the advance of 15 per cent. on all freight tariffs that have not already been advanced or arranged for, such as coal, coke and ore, which does not of itself, as has been shown at the hearing at Washington this week, meet the additional expenses that confront the carriers. I stated in my testimony before the commission that if the advance was granted that it would re-establish the credit of the railroads so that they would have no difficulty in acquiring sufficient capital to proceed actively in the construction of facilities, locomotives and cars to meet the situation, and I believe that it can be done more rapidly and more economically and to better advantage through plants now in existence than by the Government.

As to shortage of locomotives, again stating what I stated to the commission at the hearing in Washington, I have reached the conclusion a long time ago, and have more and more reached the conclusion that the difficulty in the past that caused the great congestion at large terminals was not due to shortage of cars, but to shortage of facilities at these terminals and at intermediate yards, and lack of locomotive power. That is what the carriers need—added terminal facilities, both railroad and private, in the way of warehouses and facilities for handling the shipments promptly, and locomotive power to move the cars, and I do not believe that there will be shown such a great shortage of freight-car equipment as a whole throughout this country. I do not mean, however, that there should not be large coal tonnage built. This has to be done in order to keep up the destruction and obsolescence of old equipment and cars destroyed through wrecks of all kinds, of which there will be more or less.

L. E. JOHNSON.

dust and waste lumber and timber at present, but may do so later. At present there is a greater financial return in the production of pulp than there is in the manufacture of paper, although paper is bringing a high price on the market.

The company will pay 50 per cent. above the fuel value of bagasse. The sugar-cane mills will begin operations in October, and the pulp mill is now making contracts with them for supplies of bagasse. The development of the gas fields in South Louisiana will, it is expected, furnish the sugar-cane mills with an abundance of cheap fuel, and this will cause them to turn their bagasse to profit.

A corporation owned by the same interests has been chartered under the laws of Texas for the purpose of establishing a plant at Dallas or Waco, Tex., for the purpose of manufacturing pulp out of cotton stalks.

M. W. Marsden of Philadelphia, Pa., is the president of the Sugar-Cane By-Products Co., and A. C. Bernard is the manager of the New Iberia plant. The mill will employ about 300 men.

## Activity in Eastern Kentucky Gas Field, With Outlook for Important Developments.

Barbourville, Ky., May 14—[Special.]—Following late natural gas developments in the Eastern Kentucky fields, an effort has been made upon the part of both the Kentucky Oil & Gas Co., owners of a developed gas acreage, and the Empire Gas & Fuel Co., both of New York, to get a franchise to serve the cities of Williamsburg, Jellico, Corbin, Ky., and Knoxville, Tenn. These cities are within a radius of 40 miles of new strikes in the Whitley county district. The Kentucky Oil & Gas Co.'s recent strike on the Raines lease, Whitley county, is said to show a production of 2,000,000 cubic feet from the Big Injun sand at a depth of 1480 feet. The distance of this well from the deep gasers supplying Barbourville is about 20 miles, and gas and oil companies have made a vigorous scramble to secure holdings over

the intervening area, believing the territory to be rich in deep gas.

Over in the Allen county field, many miles west of the Whitley-Knox district, some good showings of gas have been struck and efforts are now being made to get gas franchises for the municipalities of Scottsville, Franklin, Bowling Green, Glasgow and Elizabethtown for serving these cities with gas from the Allen, Warren, Barren and Metcalf county districts.

Five small gas wells have been drilled in the edge of Lincoln county, adjoining Rockcastle county, by Lincoln county interests, and the owners expect to develop a sufficient production to serve the counties of Danville, Stanford, Richmond and Lancaster.

The Empire Gas & Fuel Co. is anxious for gas franchises in many Kentucky towns. That company has opened offices at Winchester, under the management of F. B. Tomb, who has a staff of 15 geologists in the State. This company, it is said, looks with great favor upon Kentucky as having possibilities for a gas field quite equal to its petroleum production. The company now has its drilling machines in several districts.

The Central Kentucky Natural Gas Co., which supplies Lexington, Paris, Winchester and other cities, is planning new developments on a large scale over its Eastern Kentucky holdings. Plans are said to include the drilling of many new wells in Menifee county, its principal source of supply. A great deal of gas is produced in Northeastern Kentucky counties, particularly in Menifee, Morgan, Bath and Boyd, contiguous to West Virginia gas fields owned by the Columbia Gas & Electric Co., which serves Cincinnati, Louisville and other cities.

The Enslow interests of West Virginia are taking up leases in Edmonson, Grayson and Hart counties, near the Tennessee border, with the expectation of drilling at an early date. Associated with these capitalists is W. H. Cunningham, mining engineer of Huntington, W. Va. The Enslow interests are big operators in West Virginia, and are related to the Columbia Gas & Electric group, which includes the banking-house of A. B. Leach & Co., New York.

The Cumberland Natural Gas Co. of Barbourville and associated companies, the Algonquin and Red Bird oil companies, controls 80,000 acres of leases scattered over the Kentucky field. These companies are now drilling a number of wells, and plan, if a sufficient gas and petroleum production is developed, to install a gasoline refinery.

The Cherry interests of Chicago and Farmer & Kennedy of Barbourville are each drilling wells in the famous Burning Springs district of Clay county, in the Oneida vicinity.

## Alabama Bankers Pledge Co-operation for Securing Greater Food Crops.

Mobile, Ala., May 12—[Special.]—Every co-operation within the power of the Alabama Bankers' Association will be given the Government in its present emergency. By resolution the bankers urged every member to subscribe liberally to the Liberty loan. There were about 300 bankers in attendance upon the convention, which met in Mobile in three days' session and adjourned Saturday, May 12.

Through its agricultural committee the Alabama Association expects to do much toward encouraging greater food crops in the State. The association appropriated \$1000 for the use of the committee. Another step taken was endorsement of a reform system for land titles.

Herbert Quick, member of the Federal Farm Loan Board, Washington, D. C., declared in his address here that "the farmer is the basic foundation stone of the war." He added, "unless we take the war to Germany, Germany will bring the war to us."

## Tifton Meat-Killing and Packing Plant.

By October the Tifton (Ga.) Packing Co. expects to have its plant in operation with a daily killing capacity of 500 hogs and 50 cattle. About \$160,000 will be the cost of the plant, and contract has been awarded to R. V. Labarre, Jacksonville, Fla., for constructing the buildings on foundations recently completed. Contracts have also been awarded for the power plant, packing equipment and refrigeration machinery. The C. L. Brooks Engineering Co. of Moultrie, Ga., is the engineer in charge.



## A New Oil Field in Texas

EXPERT OPINION THAT AN IMPORTANT STRIKE HAS BEEN MADE IN BRAZORIA COUNTY AND THAT DAMON'S MOUND WILL BECOME A GREAT AND PERMANENT PRODUCER.

By WM. B. PHILLIPS, Mining Engineer, Houston, Tex.

The bringing in of the Damon's Mound oil field in the north part of Brazoria county during the week ending May 12 is the culmination of efforts extending over 16 years. The J. M. Guffey Petroleum Co. drilled there in 1901, and W. B. Sharp somewhat later. Other wells were sunk from time to time and a little oil was found. But no considerable production was credited to the field, and while some men had faith in it, still it was regarded as a long shot. It is a well-known mound or salt dome, with possibilities for oil, gas and sulphur. But until this week it was a possibility only; now it is a reality, and one that is already attracting a great deal of attention.

The Texas Exploration Co., of which E. F. Simms, Houston, is president, began drilling at Damon's Mound in September, 1915. Wisdom Nos. 1 and 2 and Bryan Nos. 1 and 2 were drilled, but with no commercial results. In January, 1917, Bryan No. 3 was begun, and came in as a 5,000,000-foot gasser this week. The gas was used locally, under boilers, until oil began to show at the burners. The well was then cleaned out and drilled a little deeper. A great flow of oil was obtained, estimates varying from 10,000 to 25,000 barrels a day.

There is a great rush for leases, and prices are soaring.

The locality is about 60 miles southwest of Houston, and is 13 miles from rail. The nearest railroad points are Columbia, on what is known as the Columbia Tap, and Rosenberg and Richmond, on the Sunset-Central Lines and the Gulf, Colorado & Santa Fe. The wagon roads are fair, except after rains, when the mud is apt to be troublesome.

Damon's Mound is one of the salt mounds or domes that are not infrequent in East and South Texas. More than 30 of these "domes" are known, extending from Grand Saline, Van Zandt county, through Smith, Anderson and Freestone counties to Matagorda county, on the coast. The most southerly of these domes is near Falfurrias, Brooks county. Other well-known domes are at Sour Lake and Saratoga, Hardin county; Spindle Top, Jefferson county; Humble and Goose Creek, Harris county; Markham, Matagorda county, etc. The Sour Lake, Saratoga, Spindle Top, Humble and Goose Creek domes have yielded great quantities of oil, and it may be that the Damon's Mound will enter the lists as a great and permanent producer.

It is noteworthy that the two most recent oil fields in Texas, Goose Creek and Damon's Mound, should have been brought in after years of effort. The first drilling at Goose Creek was undertaken many years ago, while operations at Damon's Mound began in 1901.

The study of underground conditions at these so-called domes must depend on the willingness of the operators to give accurate logs and to furnish consecutive samples of the cuttings. It is almost impossible to say whether the oil comes from structures forming the apex or the sides of the domes, or even at some distance from the dome proper. Some of these domes are barely noticeable by the eye, and their existence has to be determined by detailed topographic work. Others, on the contrary, form real elevations to be remarked by the ordinary observer. The famous Spindle Top dome, near Beaumont, which created so great an excitement in 1901, is but 30 feet above tide. The ordinary observer would hardly notice it, although the eye of an engineer would catch it. The dome at Pierce Junction, near Houston, is so gentle a swelling that it is barely noticeable. Damon's Mound, in the north part of Brazoria county, and Big Hill, in the south part of Matagorda county, are more apparent. They form elevations in the general landscape that are to be marked at once. They occur, as indeed does Spindle Top, in an almost flat country, devoid, for the most part, of any conspicuous elevations or knolls. They occur also in a part of the State so thoroughly covered by the most recent geological formations as to render the study of their structure extremely difficult. It is on this account that accurate logs and authentic samples of the cuttings are so

important. There is almost no surface geology on which an opinion may be based.

In the last analysis, however, it is with these domes as well as with structures more easily observable—we have to drill. In an unproven oil field, as in many a proven field, there is but one thing to do, and that is to drill and to keep on drilling.

### FEDERAL NAVY-YARD PROPOSED FOR HOUSTON.

Congress Asked for \$10,000,000 Appropriation for Naval Base or Ship Channel, 35 Miles Inland from Gulf—Project Also Contemplates Munition Factory.

Houston, Tex., May 11—[Special.]—The industrial interests and the people generally of Houston are optimistic over the possibility of the United States Government establishing a navy-yard on the ship channel near this city. The first step taken is the introduction into Congress by Representative Joe Eagle of Houston of a bill appropriating \$10,000,000 for the purpose planned, which shall include a navy-yard, fire docks, naval training stations, arsenals and ordnance factory. The bill was referred to the committee on naval affairs.

Special importance is attached to the fact that Houston is situated on deep water and far enough inland for security, and that it is in the heart of the oil-producing region of the Gulf coast. Other factors are that a timber supply of practically inexhaustible quantities is nearby, with the oil fields of East Texas within easy transportation distance. Former Mayor Ben Campbell of Houston, who has made a study of the advantages which Houston offers as a site for a Government naval base, said in discussing the matter:

"Where the San Jacinto River intercepts the ship channel is, to my mind, an ideal place for the location by the Federal Government of a naval shipyard. It is 35 miles inland from the Gulf, and this point on the channel can be protected by guns stationed at Bolivar Point, Red Fish Reef and Morgan's Point, thus making a shipyard so located practically impregnable.

"With very little cost to the Federal Government, the channel already in existence from the Gulf of Mexico to the mouth of the San Jacinto River could be made as deep and as wide as necessary. Ships could be built at that point, could be brought there for repairs, and the water being fresh makes it a splendid place to clean the ships' hulls of barnacles.

"Pipe lines have already been laid and are now being operated from Oklahoma, Louisiana and Texas oil fields, thereby assuring the cheapest and best fuel, and there is available an inexhaustible supply of the finest artesian water.

"This location would be accessible for ships from the Atlantic, the Pacific and the Gulf of Mexico. We are closer to Panama than almost any other available point. With our railroad facilities reaching every point in the interior, supplies could be brought from all parts of the United States and sent by rail or water to all points in or out of the United States without delay. Also our moderate weather would guarantee open water every day in the year; there would never be a time when ice would interfere with the use of our channel. This freezing of canals, you know, is a very serious handicap with some of the inland waterways in the Eastern States.

"Industries for the manufacture of munitions of war should also be located on our channel. They would have the benefit of ample building material of every kind, besides cheap fuel oil in abundance. We could, perhaps, furnish cheaper fuel from our extensive and unlimited beds of lignite coal, in close proximity to our channel, from which electricity could be generated for the manufacture of iron from our own rich ore beds, with which Texas is abundantly blessed.

"Munitions could be manufactured here and trans-

ported to any point in the United States on the shortest notice, either by rail or water.

"I think all of these matters well worth prompt attention on the part of our citizens. The United States Government will undoubtedly find it necessary very soon to locate additional navy-yards somewhere and to establish munition factories at some safe and secure point beyond the reach of the enemy's gunboats, and, to my mind, there is no place on the Gulf coast to be found that offers so many inducements and advantages as our ship channel."

### Developing New Oil Field in Western Texas.

Thurber, Tex., May 11—[Special.]—Edward L. Marston of New York and associates, who for many years have been largely interested in mining operation here, have in process of development what promises to become one of the largest oil and natural gas fields in Texas. On a recent visit to his holdings Mr. Marston was accompanied by Henry J. Cochran, one of the vice-presidents of the Bankers' Trust Co. of New York, and Robt. M. Bryan, editor of the Black Diamond of New York.

The oil field covers a large area, and it is being systematically developed with a view to obtaining the best possible results from the different wells. There are now more than 25 producers in the new field, and several more wells are being drilled. The wells are being put down at a distance of over 500 feet. The proved territory already embraces an area of about 1000 square miles, or more than 1,000,000 acres. Although the wells are not large producers, the oil is of a high grade, and the fact that the strata is reached at comparatively shallow depth makes the industry an unusually attractive proposition, it is claimed.

The oil-producing area of this part of the State is believed to cover the larger portion of Palo Pinto, Erath, Eastland, Stephens, Shackelford and Young counties. Scattered wells of small output have been brought in in different parts of this big area, and there has been no connecting up of the different fields. North of here 75 to 100 miles are the oil fields of Petrolia, Electra and Burk Burnett.

Mr. Marston and associates plan to utilize the natural gas that they have already developed in some of the wells by piping it to different towns in North Texas. The laying of the pipe line from here to Dallas and Fort Worth has been under consideration for several months, and it is probable that the project will be carried out in the near future.

### Its Influence Still Expanding.

The Expert Prospecting & Development Co. of Birmingham, Ala., in a recent letter referring to the organization of its work, said:

"The Expert Prospecting & Development Co. has just been incorporated, very largely for the purpose of thoroughly and competently exploiting and proving up the resources of this immediate section of the South in the shape of chemical and mineral deposits existing here in largely undeveloped condition, which are at this time virtual necessities owing to war conditions.

"It is our purpose to attempt to bring some of these valuable and much needed mineral and chemical resources to the attention of experienced men with the necessary capital in such manner by means of guaranteed reports and complete data as to engage their attention and enlist co-operation in securing an immediate output.

"Your issue on the chemical potentialities of the South is in a measure responsible for this action on the part of our incorporators, who are all experienced men, active in mining operations along other lines, and impressed with the raw material output, the past supply of which, most of it by importation, has now been reduced or wholly cut off."

### To Drain 85,000 Acres in Arkansas.

Plans are being formulated for draining 85,000 acres of land in Lonoke county, Arkansas, and the Baymuto Drainage Canal District has been organized to undertake this improvement. The estimated cost is \$375,000, and construction proposals will soon be invited. The commissioners include T. W. Fletcher, president, and Tom C. Trimble, secretary, both of Lonoke, Ark.

# Owners of Railroad Securities Will Hold a Conference

ENDEAVOR TO GUARD THEIR INTERESTS WITH RELATION TO MANY BIG  
QUESTIONS SURROUNDING TRANSPORTATION IN CONNECTION WITH  
THE WAR

Problems growing out of the war situation have resulted in a spontaneous demand by owners of bonds and stocks of the railroads of the country for united action concerning their interests, and a conference has been called for May 23 at the Hotel Emerson, in Baltimore. Owners of railroad securities from various sections of the country have signified their intention to be present. Important action is expected, and the question of organizing these investors into an association will be considered.

The call says "the credit of the railroads has apparently not been sufficiently maintained to enable them to economically finance their requirements in times of peace, much less now, when upon their efficiency largely depends the successful outcome of the war, in which the United States has become so vital a factor."

S. Davies Warfield has issued the call as an owner of railroad securities. A Southerner, he has interested himself in various organizations for the development of the South agriculturally and industrially. He is president of the Continental Trust Co., Baltimore, and chairman of the board of directors of the Seaboard Air Line Railway Co. When seen in regard to the conference Mr. Warfield said:

"The call for this meeting is the outgrowth of conferences among owners of the securities of various railroad companies and who reside in different sections of the United States. Great questions are now at issue. Some of them are of considerable moment to the railroads, consequently to those who own their securities. Those charged with the responsibility of deciding questions affecting the railroads want all the light they can get in the settlement of such questions.

"There are four elements in this situation; one, the public, which is suffering from the lack of shipping facilities because the railroads have not been able to secure sufficient money to properly equip themselves; if fully aware of exact conditions, the public would re-

spond to the needs of the situation, as it always does. Another, represented by those who sell the securities of railroads to those who now own them; a third, represented by the executives who operate the railroads. The fourth is composed of those who have supplied the money with which to build the railroads and represented by their bonds and stocks.

"There is the Interstate Commerce Commission and the State commissions who represent the public; there is the committee of railway executives, trunk-line associations and organizations and committees of those who actually operate and manage the railroads; there are organizations of bankers who sell railroad securities to the public, like the Investment Bankers' Association. But there is no general organization of those who have their money in the bonds and stocks of the railroads and who have made possible the development of the country through the development of the railroads. In this country there are about 30,000,000 policyholders in insurance companies. There are 10,000,000 depositors in savings banks. All these insurance companies and savings banks are large holders of railroad securities. There are also over 600,000 stockholders in railroads, and say double that number of bondholders.

"The railroad presidents of the country have ably presented to the Interstate Commerce Commission the effect of the great increase in the cost of every element entering into the equipment and operation of the railroads. The conference will decide whether it is desirable for investors in railroad bonds and stocks to ask the commission to be heard on railroad credit, its bearings on securities and future railroad financing, and the importance of maintaining the credit of the arteries of the nation—the arteries of trade—the railroads, representing seventeen billion dollars capital investment, and what this means in the successful placing by the Government of billions of dollars in loans to finance the war and to provide for the effective defense of our country."

## Additional Companies Prospecting for Oil and Gas Near Mobile.

Mobile, Ala., May 14—[Special.]—One hundred and sixty acres of land in the Chickasabogue section, north of Mobile, will be prospected for oil and gas by the W. P. Lewis Oil & Gas Co., just organized in this city. W. P. Lewis, president of the Lewis Naval Stores Co., Cortelyou, Ala., is president of the new concern. Incorporation papers will be filed within a few days. Other officers are: W. D. Stapleton, president of the Baldwin County Bank, vice-president; Horace Davenport, Mobile accountant, secretary-treasurer. The directorate, in addition to the above officers, will consist of James L. Coleman, manager of the Gulf States Shipping Co. and vice-president of the Mobile Chamber of Commerce, and Dave S. Bauer, Mobile druggist. Drilling will begin as soon as the equipment and machinery can be assembled at the site, officers declared.

If present plans of local companies are carried out, drilling of wells other than those in which drilling is now under way will start here during the week ending May 19.

## The Cotton Movement.

In his report of May 11 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 284 days of the season was 11,808,813 bales, an increase over the same period last year of 357,805 bales. The exports were 4,764,157 bales, an increase of 102,817 bales. The takings were, by Northern spinners, 2,489,671 bales, a decrease of 165,814 bales; by Southern spinners, 3,712,082 bales, an increase of 283,258 bales.

## INJUSTICE OF THE VOLUNTEER SYSTEM.

A Plea for Patriotism and for the Right in the Organization of Our Armies.

By MARY INGE HOSKINS, State Normal School, Florence, Ala.

During the days of 1776 my ancestors fought in the Revolutionary War; one of my grandfathers fought with five sons, side by side. Later, when we had the war with Mexico over the disputed territory, my uncles marched under "Old Glory" as members of the "Mississippi Rifles." One returned with impaired vision. I remember sitting often on his knee, in the purple Southern twilight, and listening to the stirring battle scenes he depicted and felt the triumphant throb of patriotism when he would exclaim, "Remember Goliath!" "Remember the Alamo."

All my kinsmen fought under the Stars and Bars; two uncles never returned; they still lie in the old peach orchard at Manassas. In the Spanish-American war my sons were not old enough to fight for their country.

On June 17, 1916, I received a special message. I knew its contents before it was opened. My oldest son had enlisted in the Washington Artillery at New Orleans. He was simply doing his "bit" toward following a family precedent.

Being one of a family which has volunteered in every war, whose members have always been willing to lay down their lives, if need be, for their country's sake, I feel privileged to criticize the volunteer system of today. There are some things in life that are far worse than war, aye, worse than death, even, and the decline of patriotism is one. The wild effort to save life at the expense of the other fellow is another. The great wheel

of time has made another turn, and hard as it may seem, there are splendid young men all over the country who have not enlisted, and who are against the volunteer method of raising troops.

There can never be a pull to a slack line. There must be a taut tension. Is it such a far call to "Don't give up the ship" of 1812 to "Give up the ship" in 1917? To the impressment of the seaman of 1812, to the killing of innocent men, women and children of 1917?

William II has violated every international treaty on land or sea. History has no madder orgy of blood than the one he has instituted, no wilder score of human wreckage than he is hacking. Now, while men are willing to drench the altar of patriotism with their life-blood in defense of outraged principles, and to maintain the rights for which their ancestors fought in other days, is it right for "slackers" to fold their hands in safety and do nothing for their country, and spend money made from a war bride?

This is no time for individual preference. Not a soul in the United States wanted this war. We have never been the aggressor in the four foreign wars into which we have been forced. The South did its part toward the election of Woodrow Wilson in order that he might, by his wise judgment and diplomatic measures, keep us out of war, if possible; but it has not been possible; he has done his best; we have stood contumely to the quick until peace and honor were antipodal. We are in for it, and each individual must do his or her very best. If it is necessary to conscript soldiers, that is left for us to do; if the recent volunteer system has proven a failure, some other measure must be inaugurated. The volunteer system is admirable for the soft-footed fellow wearing gum shoes, and has become so proficient in the art of ingratiating, in order to manipulate, for then those who volunteer will receive honors and salaries better than they had in private life; those without the pale, the patriotic private, will bare his breast for the bullet.

If we are warring for the world to be governed by a government selected by and for the people, governed by popular vote; that no people shall be willing subject to another nationality or race; that each individual shall have a fair showing and come out of the thralldom of autocratic slavery into a free democracy, whose principles lead out and away from enslavement, then nothing but our very best will answer.

In the selective volunteer system, all men should be registered for whatever service they are best fitted to render. Agricultural, mechanical, scientific, professional and laboring classes will be needed in this great system, and the Government must pay commensurate to service given. A private on \$30 a month may not be able to reason out the major premise in a syllogism, according to Aristotle, but he will quickly reason out the fact that he is doing \$60 worth of efficient work for \$30, and the other fellow is receiving \$60 for 30 cents' worth of efficiency. Let the Government be honest with its men.

America expects nothing from this war but the establishment of right all over the world. When crowns and scepters are put in the melting pot, then swords may be molded into plowshares.

Until America has done her duty, there cannot be the peace everlasting. This is a war for peace, and after all is said and done, it is the only possible way in which to establish a brotherhood of nations and bring about the peace taught by the Man of Galilee.

## Large Irrigation Project Proposed for South Texas.

Austin, Tex., May 12—[Special.]—For several years there has been more or less discussion among the people of South Texas of the feasibility and practicability of constructing a large dam for the purpose of separating Nueces Bay from Corpus Christi Bay, in order that a water-storage reservoir might be created that would supply sufficient water to irrigate about 200,000 acres of land in the valley of the Nueces River. In view of the fact that the Federal Government is now exercising every possible means of increasing the agricultural production of the country, and that it is desired that as much additional acreage be brought into cultivation as possible, this is regarded as an opportune time to put into accomplishment the reclamation project in the Gulf coast region adjacent to Corpus Christi.

The proposed dam would be about 4800 feet long, and the capacity of the reservoir that it would create would be about 600,000 acre feet.



# Shipbuilding Industry South Shows Continued Great Activity

FURTHER ANNOUNCEMENTS OF NEW ENTERPRISES—SOUTH TO DO ITS PART IN MEETING NEEDS OF GOVERNMENT NOW AND WORLD DEMAND FOR VESSELS HEREAFTER

It is apparent from the unusual shipbuilding activity throughout the Southern States during the past several weeks, as witnessed by the numerous announcements the MANUFACTURERS RECORD has presented of arrangements for establishing shipbuilding plants, that the South will not remain a laggard in this field. Recent announcements of plans for Southern shipbuilding insure great activity in this branch of industry, as indicated by the several large enterprises with capitalizations ranging from \$1,000,000 to \$15,000,000 and the many establishments with capitalizations of lesser amounts, all mentioned since May 1.

Southern shipbuilders already established are securing a share of the Government contracts that are being awarded in connection with the \$50,000,000 expenditure which the Federal Shipping Board is arranging through its Government-owned corporation, under the management of Colonel Goethals, while capitalists are establishing new plants for building ships under contracts which they are obtaining from the Government.

There is every reason why the South should experience a great and lasting expansion of its shipbuilding activities. The various plants for building and repairing ships which will be established in connection with the Government's plans for overcoming the submarine menace and supplying our European allies with food and munitions will form the basis of a permanent and extensive Southern shipbuilding industry. This permanency would seem assured because the shipowners of the world will be demanding for years to come all the vessels, specially cargo ships, that it will be possible to construct.

The MANUFACTURERS RECORD today presents interesting facts regarding the new shipbuilding enterprises it has recently reported for the South, besides giving several additional plants, announced during the week, which include a \$1,000,000 corporation organized to build shipyards near West Point, Va., and a \$500,000 yard to be located at or near Baltimore.

Details of the week's shipbuilding news are presented in reports to the MANUFACTURERS RECORD outlined in the following statements:

The York River Shipbuilding Corporation, Port Richmond, Va., has been chartered with a capitalization of \$1,000,000 for the purpose of establishing a shipbuilding plant at Port Richmond, on the Mattaponi River near West Point, Va., developed two years ago by the Old Dominion Industrial Corporation at Richmond. This plant will at first build ships for the Government, and after the completion of these contracts it is the intention to provide facilities for constructing steel vessels. About 1000 men will be employed when ship construction begins, and this will be supervised by Adolph Shelandier, naval architect, formerly connected with the United States Government, and E. E. Baker, until recently of the Racine Boat Co., Racine, Mich. The plant site was selected by Mr. Shelandier in co-operation with W. C. Olds, industrial agent of the Southern Railway, after an investigation of various suitable locations on the Virginia coast. Such important facilities as deep water and favorable transportation rates resulted in the selection of Port Richmond. The Southern Railway will construct a branch to the plant from its main line at Euclid Heights, and connection will also be effected with the proposed railway from Urbanna, Va. Contract for building the initial shipyards will probably be awarded to T. S. Winston & Co., Richmond, Va., and New York, the successful bidders for constructing the proposed Richmond, Rappahannock & Northern Railway from West Point to Urbanna, a distance of 17 miles. Officers of the York River Shipbuilding Corporation have been elected as follows: Warner Moore, president; James Mullen, secretary; Oliver J. Sands, treasurer; each of Richmond; Crosby Thompson, vice-president, West Point, Va. The directors are: T. S. Winston and J. R. Paschall of Richmond, Pleasant Reed of West Point, Va.; Thomas Hampton of Washington, D. C.; Tazewell M. Carrington, A. L. McClellan and A. L. Hawse of

Richmond. Mr. Paschall and associates control great areas of Southern pine timber property on the Atlantic coast, and are prepared to deliver ship timber at Port Richmond by water. They also control the Richmond Structural Steel Co., which has a plant capable of producing the iron construction material necessary for building wooden ships.

An official of the Tarver Shipbuilding Corporation, Beaumont, Tex., sends the MANUFACTURERS RECORD further particulars of this company's plans. He writes that the assets of the Beaumont shipyards which were purchased include from \$6000 to \$8000 worth of machinery for constructing and repairing ships. The new machinery to be purchased will include additional band saws, drills, air compressors, etc., needed when the entire property is used for ship repair and construction. If larger marine ways are constructed or a drydock built, then machinery and equipment for these facilities will be purchased. Additional equipment which will be purchased at this time will cost from \$2000 to \$5000, unless the company contracts to build more than one boat or to install larger marine ways or a drydock. It is probable that for the present the company will build only wooden boats with tonnage ranging from 600 to 1000, but no contracts have as yet been signed. It is contemplated to construct one or more vessels and sell them when completed, though it is probable that contracts will be made with the Government for as many boats as can be built on the property. At all events, the management will offer its plant to the Federal Shipping Board. This Tarver Shipbuilding Corporation was mentioned among the new enterprises last week. It has effected organization with an initial capital of \$150,000. M. Storhaug, the manager, held a half interest in the Beaumont Shipyard Co., purchased controlling interest in this establishment and sold all his holdings to the new corporation. Additional land purchased includes a 500-foot frontage on the Neches River, facing the turning-basin, and provides the plant with sufficient space for constructing two schooners of from 1000 to 5000 tons capacity. The manager began his shipbuilding experience in his father's shipyard in Norway, and in the United States has been connected with shipbuilding plants at Perth Amboy, N. J.; Brooklyn, N. Y.; Portland, Ore., and Sidney, Australia. He has been connected with the Beaumont plant for about a year.

The Navy Department, Bureau of Yards and Docks, Washington, will soon award contracts for a \$550,000 machine-shop building and a \$370,000 foundry structure at the Norfolk Navy-yard, Portsmouth, Va. These plants are to be equipped in connection with the Government's plans for additional and improved facilities for ship construction and repair at the Norfolk Navy-yard. Proposals will be received until May 21, and the specifications (Nos. 2371 and 2375), with drawings, are obtainable upon application to the bureau and to the commandant of the navy-yard. The shop will be 600 feet long by 130 feet wide, of steel construction, with hollow tile walls stuccoed, having steel window sashes and fireproof doors. Its construction will require 3250 tons of structural steel, 80,000 feet of ribbed glass and 3000 feet of wire-ribbed glass. The foundry will be of the same type, and require 2000 tons of structural steel, 66,800 square feet of ribbed glass and 1000 square feet of wire-ribbed glass.

Another Baltimore shipbuilding enterprise is planned, the capitalization to be \$500,000 and the plant to be located either on the Patuxent or the Potomac River. It is proposed by Robert J. Gill of Baltimore, who is now endeavoring to complete details for securing the necessary capital and effecting permanent organization. This company has been contemplated for some weeks, and its initial plans are for securing Government contracts for wooden ship construction.

The J. F. Coleman Engineering Co., New Orleans, writes to the MANUFACTURERS RECORD:

"In behalf of clients we have acquired an option on

waterfront property just outside the city limits of Mobile, Ala., which we are now investigating by means of topographical and hydrographical surveys, etc. We hope to report prior to expiration of option. Until our report is acted upon by our clients we are unable to advise you concerning the details of our project."

This statement tells the status of the plan of J. F. Coleman, civil engineer, New Orleans, and associates, who were mentioned last week as proposing to build shipyards at Mobile, their plans being reported as contemplating an ultimate investment of several million dollars for land, docks, buildings, machinery, etc.

A plant for constructing wooden ships will be built at Port Arthur, Tex., by the Long-Bell Lumber Co. of Kansas City, Mo., and Port Arthur. L. L. Chipman, manager of the company's export department, headquarters at Beaumont, Tex., has conferred with the officials regarding this enterprise, and will visit Washington to confer with the Federal Shipping Board regarding contracts for some of the proposed wooden vessels for the Government. In any event, it is the intention to establish yards for building wooden ships, and possibly this may develop into facilities for other classes of construction.

Further facts have been announced regarding the plan of Rolf Seeberg, the well-known shipbuilder of Mobile and New Orleans, to locate shipyards at Mobile. He has purchased and optioned 430 acres of land, including a frontage of 3000 feet on Dog River and extending to the Louisville & Nashville and Mobile Bay Shore railways. This property is to be utilized as a site for the plant, which is expected to employ 1000 men soon after it begins operation. Mr. Seeberg is quoted as stating that he will visit Norway and other European countries with a view to interesting capitalists in this shipbuilding enterprise.

The Williams Fair & Park Construction Co., R. M. Williams, manager, New York, is acting in conjunction with the industrial agent of the Seaboard Air Line Railway in an effort to secure a waterfront site for its proposed shipbuilding plant at Tampa. This company plans to establish yards for building wooden ships for the Government and later to provide facilities for the construction of steel vessels. Its initial facilities are to include marine ways for wooden vessel construction. Last week it was stated that the Williams Fair & Park Construction Co. is arranging to build shipyards at Tampa.

The Henderson Iron Works Co., Mobile, Ala., advises the MANUFACTURERS RECORD that it will build a 6000-ton floating drydock to be operated in connection with its iron works, the latter consisting of all necessary shops and modern equipment for building or repairing iron or wooden vessels of any description. Its property has a frontage of 1000 feet on the east side of Mobile River. Last week it was stated that the Henderson company proposed an investment of \$300,000 for additional equipment. Frank Henderson is president of this company. Last week's mention of W. L. Henderson was an error.

Horace Turner of the Turner Terminal Co. advises the MANUFACTURERS RECORD that he and Eastman, Gardiner & Co., the well-known manufacturers of lumber, Laurel, Miss., have not agreed to build any ships, and that there is nothing definite that can be said on the subject at this time. The firm named was mentioned last week (in a report) as interested with Mr. Turner in plans for locating shipyards at Mobile, Mr. Turner having a suitable shipbuilding plant site on the waterfront.

The MANUFACTURERS RECORD has further information regarding the Bates-Hudnall-Jetton Company's proposed shipyard at Tampa, mentioned last week as to be established. N. W. Greene, the company's engineer, advises: "At first we planned a temporary yard for the construction of wooden ships for the Federal Shipping Board. After going into the matter, we have about decided to make the equipment permanent and to equip for the construction of both wooden and steel ships." Land fronting on the Tampa estuary has been leased as a site for this shipbuilding enterprise.

Three wooden steamships will be built by the Mason Forwarding Co., Jacksonville, Fla., which has obtained a Government contract for these vessels. The company has a plant sufficiently equipped for this contract, and has engaged Edward S. Muchemore of Bridgeport, Conn., a master shipbuilder of the New England district, to supervise the construction.

Twenty submarine chasers will be constructed at

Alexandria, Va., by Tucker K. Sands, vice-president and cashier of the Commercial National Bank, Washington, D. C. Mr. Sands has purchased the shipyards of Chas. A. Dean, and will utilize this plant for building the ships, for which he has received contract from the Government. Mr. Sands advises the MANUFACTURERS RECORD that he is not now prepared to state details of his plans.

Government ships are being built at the shipyards of the Clooney Construction & Towing Co., Westlake, La. This corporation has an extensive plant in its class, and is at present employing nearly 1000 men upon construction, which includes the character of wooden vessels for which the Government is awarding contracts.

The McLean Contracting Co., Baltimore, advises the MANUFACTURERS RECORD that it will remove its plant (marine railway, shops, docks, etc.) to the Sagax property, on the waterfront, adjoining that which the Coastwise Shipbuilding Co. (lessee of the McLean Wharf & Warehouse Corporation) is now operating. It will use the buildings already upon this property and install launching ways upon the vacant land, all construction being by the company's own forces.

C. C. Daniels of New York, representing the Southern Shipbuilding Corporation, advises the MANUFACTURERS RECORD that his company is not now prepared to make any definite announcement regarding its plans. The Southern Shipbuilding Corporation was mentioned in our last week's shipbuilding news as having been incorporated in Delaware with a capitalization of \$10,000,000.

S. N. Cornwall, manager of the Cornwall Construction Co., Tampa, has secured contracts for four wooden ships for the Government, and will make immediate arrangements to begin construction. His company was mentioned last week as to construct a shipbuilding plant, his proposal being to equip for general wooden vessel construction as well as for building submarine chasers.

Other timely news on the subject of Southern shipbuilding is contained in a dispatch from New Orleans, which says:

"Construction will begin at an early date in Atlantic and Gulf shipyards on possibly 50 wooden ships as part of the nation's fleet of commerce carriers, according to J. E. Rhodes, secretary-manager of the Southern Pine Association. Mr. Rhodes returned to New Orleans this week from Washington, where, with other members of the association's committee on raw materials, he conferred with the Federal Shipping Board and other authorities regarding the country's needs for lumber for the construction of ships and army cantonments. Because of difficulties in obtaining skilled labor, the number of ships to be built in this section immediately is not so large as was thought would be the case. Major-General George Goethals, chief of construction, is of the opinion that it will be advisable to undertake the building of as many vessels as the workmen available justifies. Later, as conditions warrant, it is expected the number will be increased. Plans and specifications for the standard type of ship decided on by the Government are expected to be received here within a week. The matter of furnishing materials for army cantonments, or groups of buildings for the housing of soldiers, also was taken up at Washington by the Southern Pine Association's committee. The army will need nearly 400,000,000 feet of lumber for cantonments, and a great part of that used is expected to be Southern pine, which is the cheapest and most easily available lumber in most parts of the country. There will be 30 of these cantonments, each sufficient for the housing of 25,000 men."

A dispatch from Jackson, Miss., says:

"A revival of Mississippi's great yellow pine lumber industry, seriously injured by the European war, is in sight. The building of cargo vessels on the Gulf coast has opened a domestic market for the cut of many mills, and large and small plants are preparing to meet the demand. Small mills that were forced to close in the early days of the war because they needed to dispose of their cuttings as rapidly as the mill could turn them out, will reopen, and the larger mills, which have continued to run, will put on extra shifts. Biloxi already has the contract for two 3000-ton cargo vessels, and the Gulf & Ship Island Railroad for four. Pascagoula yards are building submarine chasers, and expect to build some of the 1000 wooden craft the United States wants to carry food to hungry Europe. The great yellow pine territory is close to the coast—in fact, the coast is a part of it—and the haul from the most distant mill is short.

This is expected to eliminate the car-shortage factor, which has been so hurtful to the lumber industry of Mississippi. Lumbermen report that there is already a demand for yellow pine from the coast, and they expect it to increase rapidly. There are several shipyards in process of organization in coast cities, and each one will need quantities of timber. Mobile shipyards are also purchasing timber from South Mississippi mills. Lumbermen say the outlook is brighter now than it has been at any time since the outbreak of the European war."

## PLANS FOR THE NEW WOODEN SHIPS.

### Description of Vessels, According to Architect's Specifications—Cost of Each Ship from \$360,000 to \$400,000.

The Federal Shipping Board has received plans and specifications from its architect, Theodore E. Ferris, 30 Church street, New York, for the standardized wooden steamships for which the Government is contracting. Each of these vessels will be 281 feet 6 inches in length over all, the length between perpendiculars being 268 feet. Over the planking the beam will be 46 feet and the depth will be 26 feet. Each will be of the single-deck type, with open holds and shifting and between decks. They will have a displacement of 3500 tons on a draft of 23 feet 6 inches, the carrying capacity to be 3000 tons.

To stiffen the hull, wing-girder keelsons will be installed in addition to the main center keelson. The hull also will be stanchioned with two rows of pillars. Further stiffness will be obtained by a system of diagonal steel strapping. The straps will be ½x4 inches in cross-sections, and will go around the turn of the bilge. They will connect with a ¾x8-inch steel chord at the top. No knees will be used in the construction of these hulls. Instead, the decks will be secured by clamps and shelf timbers. Two separate designs for the frames have been provided, one for yellow pine and the other for Western fir. The timber in the fir boats, of course, will be considerably larger than in those built of pine. The construction of each hull will require about 1,500,000 feet of lumber, board measure. Each vessel will have four hatches, two masts and eight cargo booms. The machinery and crew's quarters will be amidships. A fore-castle head and poop deck also will be provided.

Some of the boats may be powered by internal-combustion oil engines, although the great majority of the crafts will be fitted with steam power. The Government is making arrangements to obtain triple-expansion engines of the ordinary type or reduction gear turbines for this purpose. The engines or turbines will deliver approximately 1400 horse-power to a single screw. The screw will be 15 feet in diameter. It is expected that the boats will have an ordinary speed of 10 knots. In order to escape attack this speed may be increased to 11½ knots by opening the by-passes between the high and low pressure cylinders. Steam will be generated in water-tube boilers operating under forced draft. Either coal or oil fuel will be utilized, as circumstances may dictate. About 500 tons of bunker capacity is provided, including 350 tons of reserve bunker capacity. Each vessel will have accommodations for a crew of 30 men. Additional accommodations for 12 gunners will be provided and the guns will be mounted fore and aft. The vessels will be electric lighted and fully equipped with wireless and other protective devices.

According to the terms of the contract under which the Government proposes to have its wooden ships built, the shipbuilder will be reimbursed for the actual cost of the work, plus a fee or profit of \$20,000 per hull. This covers the construction of the hulls only. The machinery will be installed under separate arrangements. The contract goes into detail as to cost items, and in addition to direct labor and material costs, the shipbuilder is authorized to charge a proper proportion of his overhead expenses to the Government.

The contract provides for monthly payments to the shipbuilder within 15 days after the submission of bills to cover the accrued actual cost for the previous month. A bonus of \$200 per day will be paid for every day gained over the time specified in the contract; conversely, a penalty of \$200 per day will be exacted for each day's delay beyond the specified contract time.

Under the existing plans, the shipbuilder will construct the hulls complete, but will not install the engines or boilers. These will be furnished direct by the Gov-

ernment and will be installed at central fitting-out stations which will be provided at convenient points along both coasts. The shipbuilder will be required to furnish all the lumber, fastenings, paint, rigging, fittings, electrical equipment, etc., for the hull. The contract, however, provides that the Government will have full control of all orders for material, machinery, equipment, supplies, etc., this provision being inserted to insure the delivery of materials of satisfactory quality. It is expected that the hulls constructed under this arrangement will cost about \$70 per ton, or \$210,000. The machinery, it is believed, will cost \$100 per horse-power, or \$140,000 in addition. The total cost of each vessel will probably range from \$360,000 to \$400,000.

To build a vessel of this character, shipbuilders estimate that the labor of 120 men will be required for four months. On the New England coast, where smaller crews are worked, it is believed that seven months may be necessary for the construction of a hull, employing 60 men. The efforts of over 40,000 men, therefore, would be required to turn out the hulls alone at the rate of 1000 a year. Probably an equal number would be engaged in making and installing the machinery.

## Industrial Developments and Activity in Public Improvements at Lafayette, La.

Lafayette, La., May 12—[Special.]—Lafayette has recently become quite a center of industrial activity, due to private enterprises and public improvements. Early in the year renewed activity in the Anse la Butte oil field, five miles from Lafayette, resulted in the drilling of several oil wells, some of which have proven profitable. While drilling for oil a valuable salt mine adjacent to the Anse la Butte fields was discovered, and a company was organized, with Northern capitalists as shareholders, to develop the salt property. This company is now beginning operations.

Lately the city of Lafayette decided to issue bonds for extensive public improvements. Among these are a sewerage system to cost \$90,000, a water-works plant to cost \$30,000 and additional fire protection to cost \$20,000. In addition to this, the city will spend \$30,000 in the construction of a new public-school building.

Some months ago the city of Lafayette decided to build a system of public roads in the parish outside of the municipal corporation, and \$100,000 was spent in the construction of these highways. Recently the parish government issued \$350,000 worth of bonds to continue the building of good roads in the country where the city had left off. The roads are being built out of gravel, with a clay binder. A tax to run 25 years, to maintain the roads, was also voted.

## How the Liberty Loan Bonds Are Being Sold.

The Federal Reserve Bank of Richmond, as fiscal agent of the Government, announces the plan of organization for the Liberty loan in the Fifth Federal Reserve District, which is typical of the organizations in other districts. The bank will supervise the general activities of all committees in the district and supply them with information. A central committee has been formed in each State, and all other committees in the State will report to it. Each of these central committees is composed of all the banking institutions and investment houses in the place where it is located, and these committees are at Richmond, Baltimore, Washington, Charleston, W. Va., Raleigh, N. C., and Columbia, S. C. Each central committee will act through an executive committee and will appoint as many sub-committees as may seem desirable, and it will also have a publicity man or executive manager, who should devote his whole time to its work. Through the sub-committees and also through each bank the work of placing the loan will be pushed in various ways, many of which are already becoming known or are being announced and described by the press.

## Lime, Resin, Soda, Etc., for Italy.

G. CANEPA & CIA, 2 Via S. Giorgio, Genoa, Italy.

Favor us with a list of exporters of caustic soda, carbonate of soda, chloride of lime, resin, etc. We are largely interested in those products.



# Knit Goods Convention Reflects Stability of the Industry

ANNUAL MEETING AND EXHIBITION OF MACHINERY AND SUPPLIES BRINGS  
TOGETHER THE REPRESENTATIVE MANUFACTURERS OF  
THE COUNTRY.

[Special Correspondence Manufacturers Record.]

Philadelphia, Pa., May 12.

With conditions in the knitting industry in better shape than for some years past, with a well-rounded program of addresses covering subjects of special importance to the manufacturers at this time, and with the best arranged and most representative exhibit of machinery, equipment and supplies used in the industry, the thirteenth annual meeting of the National Association of Hosiery and Underwear Manufacturers, held here this week, will go on record as one of the most successful in its history. The meetings and exhibition were held in the exhibition hall of the Philadelphia Commercial Museum, arrangements for this having been made by special act of the City Council and the board of trustees of the museum.

The association was welcomed to Philadelphia by Edward J. Cattell, city statistician, acting for the mayor, and by Dr. W. P. Wilson, director of the Philadelphia Commercial Museum, and a response to these addresses was made by Charles E. Leippe for the association.

In his annual address President C. P. Withers called attention to the splendid condition of the industry today, stating that there has never been a time when the relation of production and consumption were so nearly balanced as at present, and not in many years have stocks in manufacturers' hands been so low as today. Coming to the meeting with an open mind and discussing conditions with knitting manufacturers from every part of the country, President Withers stated that he had reached a fixed conclusion that there was no need to slow down the production of staple knit goods made from cotton or wool, and that curtailment was absolutely unnecessary in any of these products, and, furthermore, he believed it would be found impossible to manufacture sufficient merchandise for the public need. However, he cautioned the members in reference to silk goods, pointing out that none knew to what extent Japan was making a monopoly of the raw silk industry, and that it was highly probable that our Government would put a revenue tax on silk goods as a luxury.

Secretary C. B. Carter, in his annual report, reviewed the activities of the association in its work during the past year, calling attention to special features undertaken by the association and suggesting matters of importance for the consideration of the members. He stated that the enrollment of new members and the reinstatements during the year had been especially gratifying.

An interesting review of matters affecting the knitting industry was presented by a report from the board of directors, from which the following extracts are taken:

American capital, ingenuity and enterprise have improved one of the difficulties to the successful operation of our factories during the first year and a half of the war, chemists, backed by fearless men, having provided dye-stuffs, and we have the assurance of one of these men that the American dye industry has been successfully established.

This achievement is no less noteworthy than the strides that have been made in the knitting industry, which, according to an official report of about two years ago, was in a deplorable state, as many of them were operating at a loss, but since war was declared, taking care of heavily increased domestic consumption, the knit goods manufacturers of the United States exported of their products merchandise to the value of nearly \$23,000,000, which was an increase of \$20,000,000 over the year of 1913. This in itself is testimony of the enterprise of knitting manufacturers, who, however, may have been stimulated to greater things by the fact that last year we imported only \$771,895 worth of knit goods, as against more than three and one-half million dollars' worth in 1913. Today we are being called upon by our Government for larger quantities of supplies for military purposes than ever were required in the history of this country, and our industry will not fall short of the expectations of the extreme optimist when we are confronted with the demands for hosiery and knitted garments for the Army and the Navy.

Your directors, while not unmindful of the burdens which

will be imposed upon our citizens under the exigencies of the response to a patriotic duty, are not in harmony with the hysteria over unnecessary economy.

In addition to special executive and sectional meetings of various branches of the knitting industry, at which matters of special moment to those in each line were discussed, the following formal papers and addresses were delivered during the various sessions:

"The Distributor," by C. A. Jobes, Rice-Stix Dry Goods Co., St. Louis, Mo.

"American Knit Goods in Foreign Markets," by John S. Lawrence, Lawrence & Company, Boston, Mass.

"More American Wool," by A. C. Bigelow, president, Philadelphia Wool and Textile Association, Philadelphia, Pa.

"Taking and Filling Orders," by Robert J. Byron of Byron, Longbottom & Pape.

"Trade Acceptances," by J. H. Tregoe, secretary-treasurer, National Association of Credit Men, New York City.

In his address on "The Distributor," Mr. Jobes presented statements as to the important place the wholesale distributor occupies in our economic and business life. He gave many reasons to show how the jobber occupies a position absolutely essential to the handling of goods between the manufacturer and the retailer to the best advantage of all concerned, and cited various reasons to substantiate his points.

On "American Knit Goods in Foreign Markets," Mr. Lawrence brought out facts of especial significance to those desiring to undertake foreign business, and on this subject he said in part:

"Up to four years ago our office mail which brought with it other than a United States two-cent stamp was a curiosity. Today's mail brings from all over the world inviting opportunities to introduce knit goods products in foreign countries, an opportunity never before offered our industry.

"Let us analyze our great industry of the United States.

"The knit goods industry employs over 150,000 persons. It has a capital investment of over \$215,000,000 in over 1600 factories, giving a total annual production in 1914 of over \$250,000,000.

"Before the war about 2 per cent. of the American knit goods production was imported and 1 per cent. exported. Since the war imports of knit goods have dropped to about half of 1 per cent. of the domestic production, and exports have increased to almost 9 per cent., a net change in two years of over 10 per cent. of the American production. No wonder we are enjoying prosperity and are disturbed over the future of exports and imports.

"Exports of knit goods from Europe have greatly decreased. The Central Powers were the principal knit goods export factors of the world, and merchants who had thus lost their sources of supply have turned to the United States, at first for sweaters and warm clothing, later for lighter weight knit goods, especially hosiery, which in early 1915 was selling here at the lowest price for years. This business came to us, was thrown at us. Some of us refused it, dodged it and misused it. We now have come to realize its importance, and with intelligence seek to hold at least a part of that which has come to us.

"We shall only hold that export business which we deserve. We cannot increase our costs, shorten our days of labor, increase taxes and legislation and compete with those who after the war will be more efficient, active and conduct their business with the full support of their Government in collective bargaining, in the making of treaties, etc.

"It will be a long time before old trade routes will again be established, and they will never be quite the same. The more perfect our export organization and equipment, the greater will be the difficulty of re-establishing these old routes, and during the period of reconstruction the exporting of our surplus products is sure to be vitally important.

"Anyone seeking to make a success of exporting must accept three fundamental principles:

"1. In developing a foreign market the exporter must exercise the same marketing skill he would employ in developing the most difficult domestic market. This means that he must make all possible allowance for difference in merchandise standards, in business methods, and must remember that the difficulties in satisfying the customer and the difficulties in making the adjustments of dissatisfaction increase approximately with the square of the distance separating the market from the mill.

"He must be ready to sample and make what the foreign markets want. He may later be able to show the desirability of his standards over those of other nations from whom goods were formerly bought, but before forcing his standards he must accept what the market demands and be liberal in his samples and have confidence in his merchandise.

"The substitution of what we in America have found to be best in the place of what local custom is used to certainly requires clever and intelligent salesmanship.

"2. The exporter must realize that he has assumed grave responsibility to preserve not only his individual reputation, but the national reputation as well. The preservation of this reputation involves not merely honesty in transaction, but also a scrupulous regard for the implied obligations, such as continuity in the conduct of business.

"He must learn to reserve a certain quantity of goods for each market. The offering of merchandise at his convenience when there is a surplus, regardless of the price, is of little avail in the development of foreign markets.

"3. The exporter must adopt and rigidly adhere to an intelligent price policy in his dealings with foreign markets. He must learn to name the necessary prices to buy and hold markets. Otherwise it would be easy for the foreigner to undersell him in one market after the other, should he be unwilling to fight. Of course, the time may come when a market must be abandoned, but the abandonment of a market should be deliberate, after thorough study, and not neglected, as is so often the case. Remember that our competitors in foreign lands make their mistakes. We may secure markets through their stupidity, although in the past we have been by far the most guilty.

"Those who do not accept these three principles in export trade are only injuring those who are really seeking to better themselves and their industry, and I trust they will not attempt to solicit foreign business."

President Bigelow of the Philadelphia Wool and Textile Association, who has been conducting a nationwide campaign to arouse the people to a realization of the need of more sheep raising, gave some strong and impressive facts as to the importance of this subject. He emphasized the steadily decreasing per capita production in the United States of food crops and meat animals. He especially emphasized the decrease in sheep production, stating that in the period from 1900 to 1915 this amounted to 48 per cent., and pointed out that this decrease was being continuously affected by dogs. The breaking up of the great sheep ranches in the West tends to further decrease sheep growing in that section, and he claimed that the greatest field for larger sheep production lies in the section east of the Mississippi River, extending from New England to the Gulf. He told of the importance of sheep in any farming community, and illustrated this by reference to many farms that in previous years were prosperous and fertile through sheep raising, had since lapsed into unproductiveness when the sheep were discarded.

He made an earnest plea to the members to further the campaign in their sections in the interest of more sheep raising, pointing out how very vital this was to the country, not only for meat production, but for the more important purpose of clothing.

The impression of President Bigelow's address upon members was evidenced in the resolutions adopted at the close of the meeting for movements that would further more sheep raising and prevent their destruction by dogs.

The matter of "Trade Acceptances," which as yet, through lack of experience, is not fully understood and appreciated by the business men of the country, was discussed in an analytical and comprehensive way by Mr. Tregoe of the National Association of Credit Men. In addition to the general review of business conditions and credit matters covering several decades, he dis-

cussed the important subject of credit and trade acceptances, and summarized the features of past and present methods of handling credits, discussing objectionable phases of the open account system and the cash premium system, and pointed out the beneficial influence of the Federal Reserve act in recognizing self-liquidating commercial paper as a national asset which would be acceptable for rediscount at the Federal Reserve banks and could be bought by these banks in open market, and which for specific reasons have been called the "Trade Acceptance." Mr. Tregoe analyzed some of the evils of the previous methods of handling credits, and as opposed to these made the following statements in regard to the advantages and protection that would be given to the sellers of merchandise as the resultant benefits of trade acceptances:

A better respect for the terms and conditions of the sales control.

A decrease in the return goods evil.

A better control of the cash discount premium and its allowance only when earned.

A decrease of necessities, fancied or real, for the pledging and sale of accounts receivable without direct or constructive notice to creditors.

A closer relation between the buyers and sellers of merchandise.

The building up of a reserve should stress arise at any time when banking facilities for one-name paper might be contracted, and at rates of discount preferential to the rates that have been or will be granted for the rediscounting of single-name paper.

In discussing the advantages of the trade acceptance to the buyers, and how they can be made to realize these and induced to use the trade acceptance, he said: "To the buyer of merchandise it is more difficult to offer arguments in favor of the trade acceptance, and we fear a disposition has already been spread abroad among the retail merchants that the trade acceptance was designed for the benefit and protection of the manufacturer and wholesaler, and which we hope sincerely may be suppressed, for this is a plan of direct advantage to everyone who participates in our commercial system and one that should have united support.

"To the buyer we can say that it encourages greater care in the buying of merchandise, so that contracts will be entered into that may be cared for comfortably within the period of the sales terms; that it provides a form of paper which, when paid promptly, will give to the buyer a good standing with his bank, for it will be customary to exchange the trade acceptance coincident with the delivery and receipt of the merchandise, and thus the bank will know when trade acceptances are paid; that the buyer is meeting promptly the sales terms; that it establishes a closer relationship between the buyer and seller; that it will reduce the bad-debt waste, thus decreasing one of the overhead expenses of the manufacture and wholesale business, the benefits of which would accrue to the buyer in lower prices; that it will protect the merchant against forms of competition which are difficult to meet, for naturally the trade acceptance will embody advantages in prices and values that cannot be availed of where the trade acceptances are not given, and such an attitude will prevail with the merchant who is not devoting proper respect to his paying reputation and may not be honestly disposed.

"Finally, there is every reason in our sincere belief why the trade acceptance should be encouraged by manufacturers and wholesale merchants, and that it is doing injustice to the subject for any distributor of merchandise to feel that the system is not applicable to his business. It will mean united effort from manufacturers and wholesalers, and that just as time and discount terms are fixed, so in the same fashion should trade acceptances be made a part of the sales contract. Confidence will win out in this important game, and may we say that at no period in our history is it so necessary that in an exchange for merchandise there should be given self-liquidating credit instruments, for no one can tell what the flotation of the large public loans might require of our banking facilities, and it is an assurance and a protection for every grantor of commercial credit to have in his portfolio a secondary reserve that will be found available and perhaps life-saving, if stress should happen and our banking power for commercial transactions were abridged."

Formal resolutions were adopted covering the following matters: Requesting that the National Government suspend for a period of three years the act which would cause the breaking up of the big sheep ranches

of the West; endorsing the "More Sheep and More Wool" campaign of the Philadelphia Wool and Textile Association; urging that the Government levy a Federal tax on each and every dog in the United States, and pledging the association without reserve and accepting its full responsibilities as standing ready to do everything within its power to serve the best interests of the Government during the war period.

For the ensuing year the following officers were elected: President, C. P. Withers, Illinois Knitting Mills, Mt. Vernon, Ill.; first vice-president, Edward Blood, Sr., John Blood & Brother, Philadelphia, Pa.; second vice-president, C. H. Johnston, Knoxville Knitting Mills, Knoxville, Tenn.; secretary, C. B. Carter, Philadelphia, Pa.; treasurer, Robert C. Blood, John Blood & Co., Philadelphia, Pa.; board of directors, Joseph Feldenheimer, Roxford Knitting Co., Philadelphia, Pa.; Eugene West, West Brothers, Syracuse, N. Y., and R. A. Scott, Peerless Knitting Mills, Boston, Mass.

The exhibit of machinery, equipment and supplies was conceded to be the most comprehensive and best arranged of any held during the existence of the association. The exposition building gave much larger quarters and allowed the exhibits to be arranged to much better advantage than previously. Practically all of the leading manufacturers in the different lines were represented, with attractively arranged booths to show the latest improvements and ideas in machinery, equipment and supplies for the knitting industry. Especially representative were the exhibits of the American dyestuff manufacturers, which gave some impressive ideas of how they have met the occasion and have equipped themselves to turn out dyes to meet the home demands.

One interesting exhibit was that of the Quartermaster's Department of the United States Army, showing samples of clothing needed for the army and having representatives on hand to explain to the manufacturers details of specifications covering garments which the Government will need.

Perhaps the most interesting feature of the exhibit this year was the one especially arranged to give an adequate display of modern machinery used in knit-goods manufacture, from the cotton yarn to the finished product. This exhibit was shown in full working order with experienced hands to operate the machines, and attracted continuous attention, because the various machines and processes could be seen in actual operation as under normal factory conditions. This comprehensive exhibit was arranged under the direction and supervision of the officials of the association, and it included exhibits of equipment and machinery from the following firms:

1917 model spinning frame of 240 spindles, Saco- Lowell Shops, Boston, Mass.; cone-winding machine, Model 30, Foster Machine Co., Westfield, Mass.; two 12-cut latch needle body machines and 11 Model K hosiery knitting machines, Scott & Williams, Inc., New York City; three double-sole cutters, Smith-Drum Co., Philadelphia, Pa.; one double-sole cutter, Weinerth Knitting Machine Co., Reading, Pa.; looping machine, Southern Textile Machine Co., Paducah, N. Y.; Hurricane improved rotary circulating machine for bleaching and dyeing, Philadelphia Drying Machinery Co., Philadelphia, Pa.; extractor for extracting excess moisture, Tolhurst Machine Works, Troy, N. Y.; automatic boarding, drying and stripping machine, Philadelphia Textile Machinery Co., Philadelphia, Pa.; electric cutters for underwear, Eastman Machine Co., Buffalo, N. Y.; sewing machines for underwear, Merrow Machine Co., Hartford, Conn., and Metropolitan Sewing Machine Co., Nyack, N. Y.; underwear press for folding and pressing, U. S. Hoffman Company, Syracuse, N. Y.; dyeing machine, Smith, Drum & Co., Philadelphia, Pa.; dryers for underwear, Philadelphia Textile Machinery Co., Philadelphia, Pa.

These annual meetings and exhibitions, bringing together the important factors in all branches of the knit-goods industry of the country, have been potent factors in making for greater efficiency in the conduct of this line of business, and give the executives and managers opportunities of seeing and investigating at first hand and in active operation the improvements that are made from year to year in machinery and equipment. Attendance at these meetings has come to be looked upon by knitting-mill officials as an important and necessary duty for the most successful conduct of their business.

## "LIBERTY" BONDS FOR THE MASSES.

### Instalment Payment Plan Announced Which Is Expected to Be Popular.

An excellent plan for the benefit of small investors in connection with the offering of the United States Liberty loan is announced by the Continental Company and the Continental Trust Co. of Baltimore. It is this, that they will sell United States Government 3½ per cent. bonds of \$100 denomination to be paid for in 12 monthly instalments of \$8.50 each. Thus the buyer of a bond pays in a total of \$102, in return for which he receives a \$100 bond and the year's interest of \$3.50 thereon, a total of \$103.50 for his \$102. It is further stated that one or more bonds may be bought under this plan; there is no interest to pay and no notes to sign. The bond is bought and held for the purchaser in his or her name until the payments are completed.

In making this announcement the Continental Company and the Continental Trust Co. says: "This is everyone's opportunity to lend to the country voluntarily, prompt, definite and efficient aid and to obtain by so doing an investment which is safe beyond all doubt and the possession of which will bring lasting pride and satisfaction to those who subscribe."

The plan to dispose of the Liberty loan by means of instalment payments is expected to prove especially popular with people of small means and with salaried folks who may find it difficult to make payments in a lump sum.

### Valuable Asphalt and Gypsum Deposits in South Louisiana.

Pass Christian, Miss., May 12.—[Special].—What promises to be a valuable deposit of asphalt and a gypsum mine that is considered to be one of the best on the continent have been discovered within five miles of Lafayette, La., by Andre Martin, a member of the State Legislature from this parish.

The gypsum mine was discovered while drilling for oil. Test wells have indicated that the mine covers at least 500 acres. The gypsum rock is within 25 feet of the surface of the earth, and can be cheaply mined. Water taken from wells in the neighborhood of the gypsum mine yields high-grade plaster of paris.

The deposit of asphalt is on the surface of the earth, and covers an area of 50 or more acres. The deposit has been known to exist for many years, but the natives believed it to be rock of no value, and paid no attention to it. Representative Martin took samples of the rock and had tests made, showing that it was asphalt of a good grade.

Corporations will be immediately organized for the exploitation of the asphalt deposit and gypsum mine. Samples of the asphalt, gypsum rock and plaster of paris are now on exhibition in Lafayette.

W. D. ROBINSON.

### Another Strike of Gas in Louisiana.

Thibodaux, La., May 9.—[Special].—While drilling an artesian well on his place, seven miles south of Thibodaux, some days ago, Kleber J. Bourgeois, a planter, encountered a strong flow of natural gas. The well ran wild for several days without the pressure being diminished, when it was finally capped and brought under control. The discovery of gas created great excitement in Lafourche parish, and Mr. Bourgeois received many offers for drilling rights, but he declined to make any leases and immediately took steps to drill a well to tap the main reservoir of natural gas, which, it is believed by experts who have examined the property to exist at a greater depth. The Bourgeois property is about 15 miles from the Terrebonne gas field.

### A Sad Commentary.

FRANKLYN A. HUDSON, Houston, Tex.

I have just read in the current issue of your valued publication the retort cordiale handed the eminent Governor of Florida in the matter of census taking in aiding the recruiting of our army.

How such an individual as Mr. Catts ever became the chief executive of Florida, my native State, is indeed a mystery to me. Incidentally, it is a sad commentary on our republican form of government.



## A Model Industrial Center Created at Kingsport, Tenn.

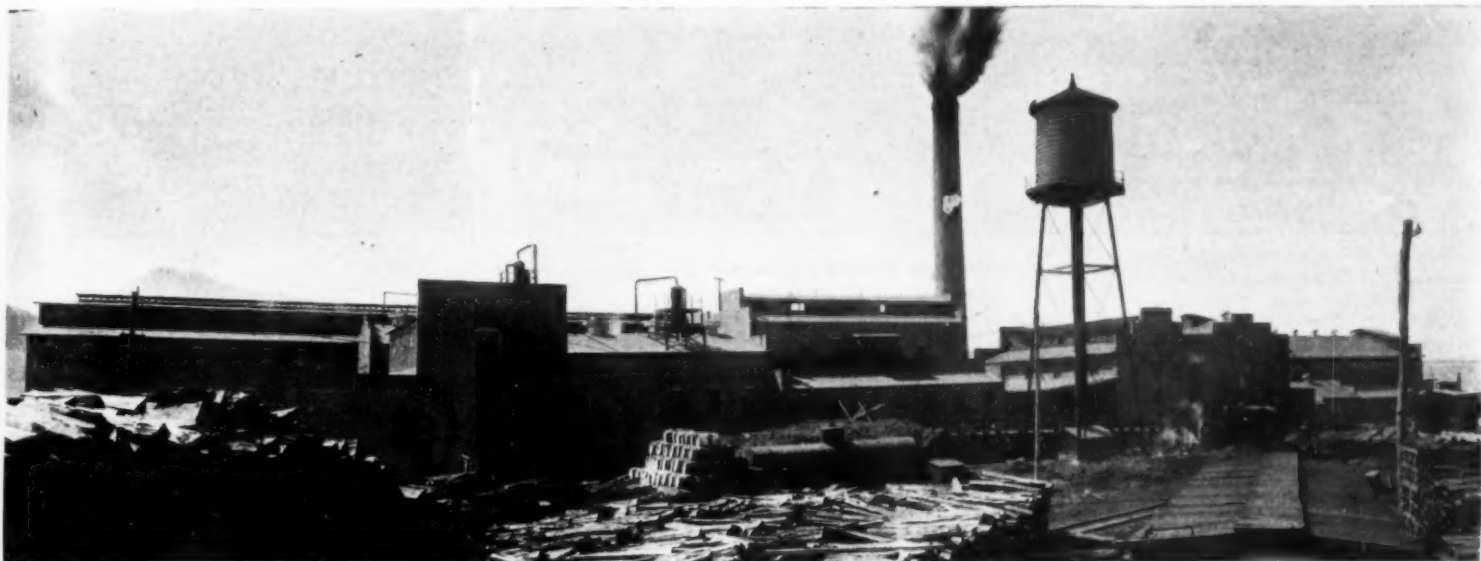
A PROSPEROUS DIVERSIFIED MANUFACTURING COMMUNITY DEVELOPED  
LARGELY BY THE BROAD POLICIES OF THE CLINCHFIELD RAILWAY.

Kingsport, Tenn., May 12—[Special.]—About five years ago Kingsport, Tenn., was but a little village, typical of the kind found in the Southern Appalachian Mountain section. It was, however, splendidly located in a broad, beautiful valley, directly on the Holston River, and on the main line of the Carolina, Clinchfield & Ohio Railway. Investigations by the industrial department of the railway indicated that Kingsport was not only surrounded by a wide range of raw materials

dance of tractable labor to be drawn from nearby mountain regions.

The first industries to be established were the Kingsport Brick Corporation and the Clinchfield Portland Cement Corporation. These were later followed by the Kingsport Extract Corporation, the Kingsport Pulp Corporation, the Kingsport Paper Corporation, the Federal Dyestuff & Chemical Co., and several others of a smaller nature.

In 1914 Kingsport had a population of around 1200 people. This has steadily grown with the advent of these large industries, until today its population is easily approximated at 10,000 people. This noteworthy development naturally assures the future success of Kingsport as a diversified industrial center, with every indication that the population is going to steadily increase. The development of Kingsport has been largely under the care of the Kingsport Improvement Corporation, which was organized to hold and develop the lands lying in and around the town and to encourage the establishment of new industries. Realizing the future before Kingsport, this corporation wisely decided to lay out a township that would embrace the most approved ideas found in modern cities. At the beginning, John Nolen, a town-planning expert of Cambridge, Mass., was employed to lay the town out in a proper manner, covering both the business and residential and



GROUP OF BUILDINGS OF KINGSFORT EXTRACT CORPORATION AND TANNERY.

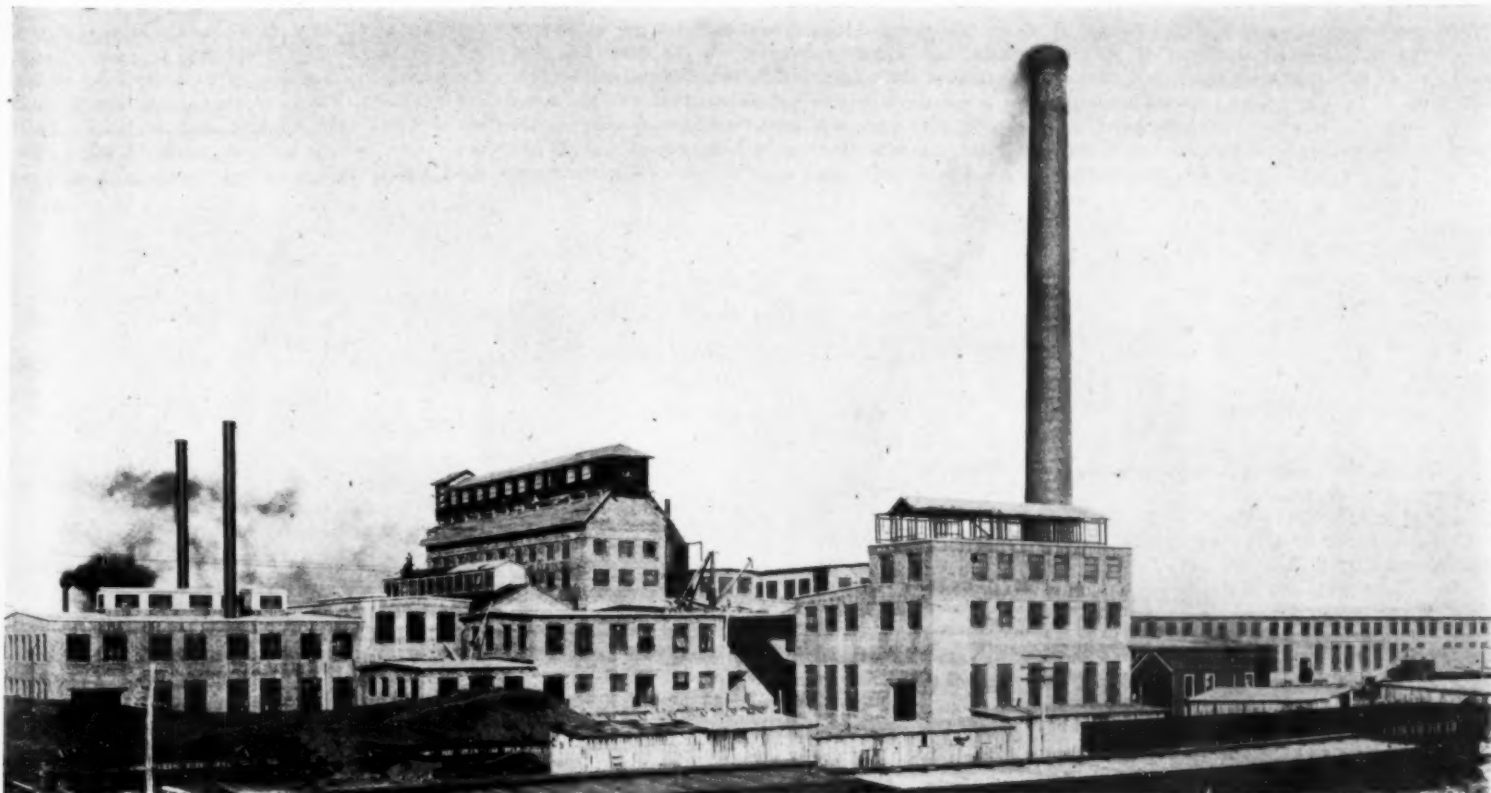
suitable for diversified manufacture, but it was splendidly adapted as an industrial center.

Railroad facilities were ample for bringing in raw materials and distributing finished products, while the rich coal fields of Southwest Virginia were within easy reach, assuring an ample supply of fuel; ample water was furnished by the nearby rivers, the mountain climate was healthy and vigorous, and there was an abun-

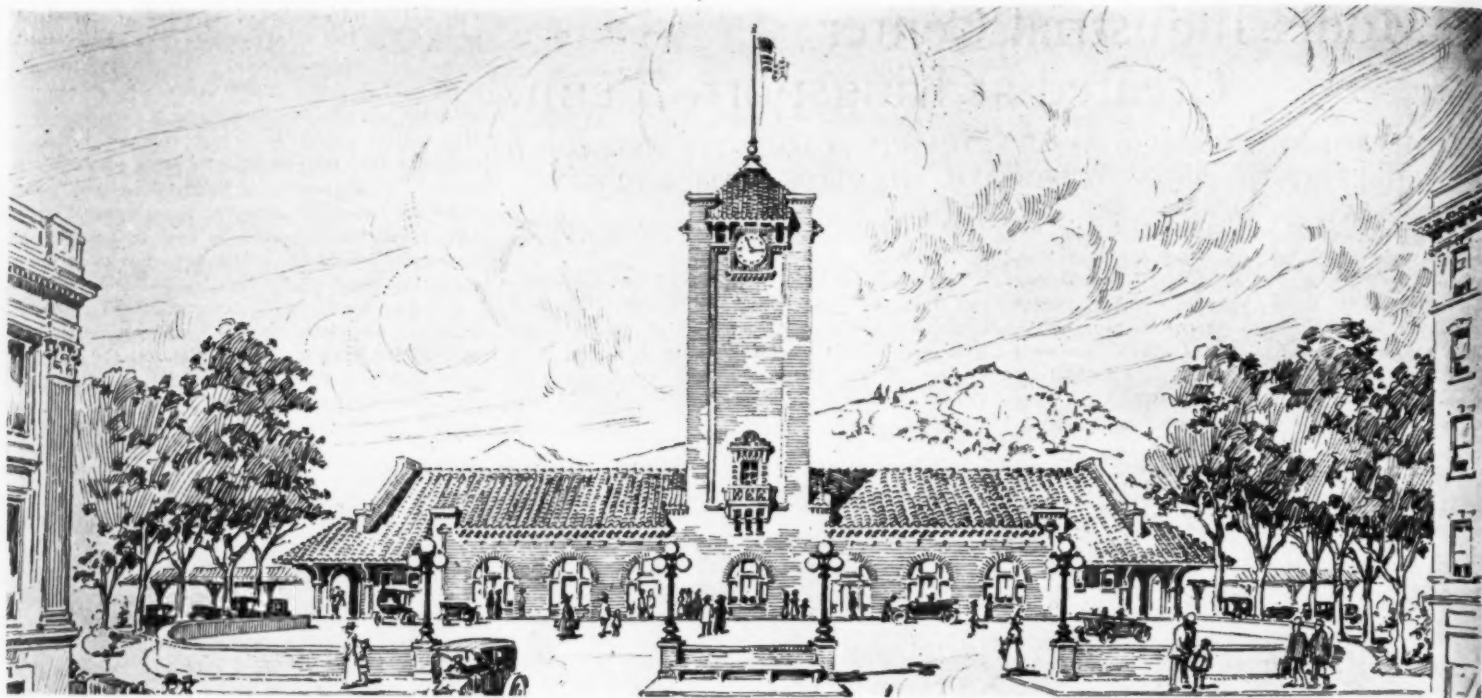
At present a modern lime plant has just been completed by the Clinchfield Portland Cement Corporation, a large hosiery mill is being established to utilize the female labor and the De Camp Glass Co., with \$1,000,000 capital stock, will manufacture glass caskets and other glassware, while a number of other plants are being built that will co-ordinate and fit in with the present industrial activities of the town.

outlying sections. This work was splendidly carried out, and the plans as developed provided for an adequate business section with broad streets and attractive approaches, and beyond a residential section with winding roads and sites for homes that had been planned so as to harmonize with the contour of the land and the immediate surroundings.

Following this, F. S. Taintner, consulting engineer,



GENERAL VIEW OF \$1,000,000 PLANT OF KINGSFORT PULP CORPORATION.



NEW PASSENGER STATION FOR CAROLINA, CLINCHFIELD &amp; OHIO RAILWAY, KINGSPORT, TENN.

New York city, was engaged to design and supervise the construction of a complete water-works and sewerage system. The water supply comes from a mountain spring six miles away, where the stream has 600 feet head and 250 pounds pressure, which makes it necessary to throttle it down for distribution in the town. The water-works system was designed on a gravity plan, thus eliminating all pumping. A large dam has been built in the mountains, creating an impounding lake that will provide an always adequate reserve supply.

A modern sewerage system, equipped with Imhoff septic tanks, has been laid out to take care of the entire needs of Kingsport for some time to come. Plans are also being made to put all wires for light, power and telephone under ground. Streets have been laid out and plans are proceeding for their construction. All of this work of creating a modern township from fields that were under cultivation naturally involves considerable planning and time to execute. While the work, to the observer, may have appeared slow, yet it has proceeded steadily, and now that most of the underground construction has been completed, it is expected that the surface work will go ahead with great rapidity.

Already a number of interesting, well-designed structures have been built which give some indication of the broad plan on which the town has been developed and suggests its attractiveness when the work has been completed. Most of the structures shown have been designed by Clinton MacKenzie, a well-known architect of New York city. Among the first buildings erected

were the two attractive churches herein illustrated. These are of pleasing architecture, and fit in with the scheme of adjoining land development that will provide admirable settings for them. Their exteriors are of brick of a tapestry finish made by the Kingsport Brick Corporation.

Another view shows a group of a number of apartments, designed by Mr. MacKenzie, and now finished and occupied. Others of harmonious architecture will be built later. An attractive hotel was designed by Mr. MacKenzie along the ideas of an English inn. This is nearing completion, and will provide one of the most comfortable hotels in this section and fully meet the needs of the town. The latest structure to be built after plans by Mr. MacKenzie is the railroad station for the Carolina, Clinchfield & Ohio Railway. A view of this as it will appear when finished is shown. It is in keeping with the general scheme of architecture, and furnishes a fitting entrance for visitors to Kingsport. This structure will also have an exterior of Kingsport brick, with tile roof and with majestic tower rising in the center. It represents one of the finest stations which the Clinchfield has erected along its entire line.

The views of these several buildings give an idea of the high character upon which the town has been planned and is being constructed. Most of the building lots in the residential section have been sold, and many attractive brick and frame dwellings are being erected that fit in with the general scheme; consequently, in several years hence, when all of the new construction work

has been finished and the grass plots, trees, flowers and shrubbery that will be laid out are in bloom, Kingsport will indeed make one of the most attractive new towns in the South.

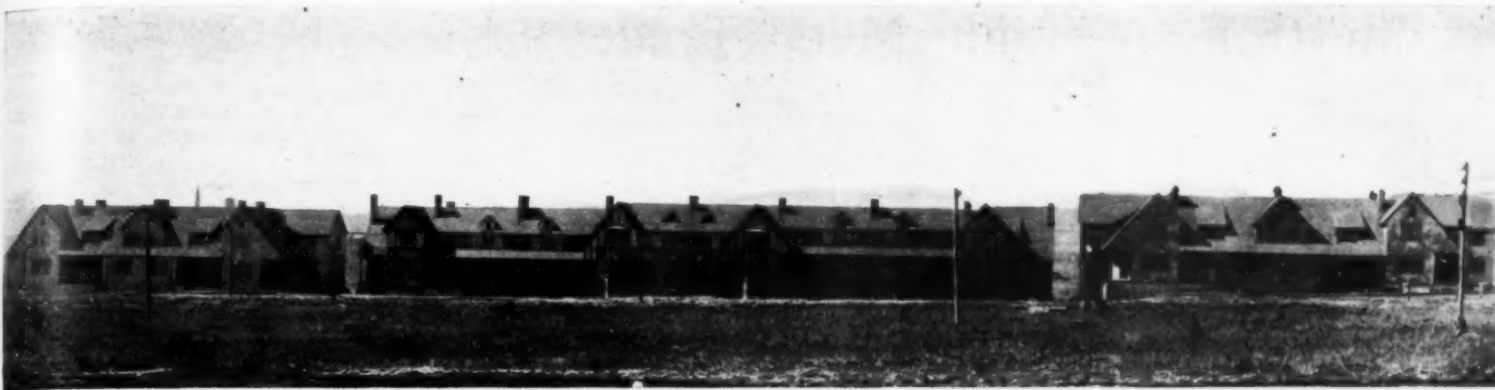
From time to time the MANUFACTURERS RECORD has published illustrations of the various industries that have been established at Kingsport, in order to give some idea of their character and importance. In addition to these, illustrations are shown with this article of the Kingsport Pulp Corporation, one of the latest industries brought into operation, and representing a plant investment of approximately \$1,000,000. This new industry will employ 300 men and manufacture 50 tons of soda pulp daily, and it is said will be the largest buyer of pulpwood in Tennessee. George H. Hardy, pulp and paper-mill engineer, of New York city, designed this plant.

An illustration is also shown of the Kingsport Extract Corporation and the Kingsport Tannery. This joint plant covers more than 20 acres, and in addition to extensive modern buildings, owns five miles of its own railway track, with its own locomotive, and employs about 250 men. The extract plant makes both powdered and liquid chestnut wood extract, and when in full operation 100,000 pounds will be produced daily. The tannery has a capacity of 100 heavy hides per day, and its principal products are oak sole leather and rough belting butts. The ultimate plans for this group of tannic acid, tannery and pulp plants include a paper plant which will manufacture a high grade of paper



TWO SPLENDID CHURCHES ERECTED AT KINGSPORT, TENN.





GROUP OF MODERN APARTMENT BUILDINGS, KINGSPORT, TENN.

direct from the soda pulp, so that all of these industries will co-ordinate and represent a splendid group of industrial achievements.

Kingsport has shown itself to be built on such a strong foundation and has grown so steadily in population that recently it was decided to incorporate and secure a municipal charter, and careful study was made of municipal governments and necessities in all parts of the country and copies of charters of other cities were secured, as well as the model charter of the Municipal League, and out of these was created the charter of Kingsport, under the direction of H. G. Morison, a

lawyer of Johnson City. It is said to be one of the most liberal and efficient charters ever devised for municipal operation. Following the incorporation of the town an election was held, at which the following municipal officials were elected: Mayor, J. W. Dobbins; councilmen, R. Y. Grant, F. E. Mahan, J. L. Camblos and T. C. Warrick. Under the law the councilmen were authorized to employ a city manager, and William R. Pouder, for a number of years city recorder of Johnson City, was selected as city manager, with full power to conduct the city along efficient business lines.

Thus it will be seen that those responsible for the de-

velopment of Kingsport as a model industrial township have worked out their plans along broad-gauged, well-defined lines, and as a result are creating a community which will not only make for the operation of industries in an effective manner, but will also provide a satisfied home atmosphere for the workers that will reflect itself in contented, happy employees.

The site of Kingsport was fixed by nature as an ideal one for an industrial center, and the business leaders responsible for its development have caught the spirit of this opportunity and are laying a solid foundation for its future growth and expansion. WM. H. STONE.

## News and Views from Our Readers

### Cottonseed Products and Their Value to the Country.

CHAUNCEY SMITH, Atlanta, Ga.

I note with much gratification the editorial in your issue of May 3 on the subject of oleomargarine. I am satisfied from various sources of information besides your article that your statements are absolutely correct. Why do not the producers of oleomargarine unite in a movement, first, for the removal of the present unjust and discriminatory tax, and second, for the popularization of their product through a national advertising campaign? Let them select a pleasing and distinctive color for their product which would differentiate it clearly from butter, and then advertise it as a better, cleaner product than most butter, and, particularly, make a stand for it on its own merits, and not simply as a substitute.

[Unfortunately, the United States Government has persistently, in the interest of the creamery butter-makers of the West and of the cattle industry of that section, fought the cottonseed-oil industry by imposing an absolutely unjust, indeed an iniquitous tax on oleomargarine, not for the purpose of producing revenue, but for the purpose of giving a bounty or bonus to butter as against the product of cottonseed oil. We believe that this is a time for a fight to be made in behalf of cottonseed oil and cottonseed products, and Mr. Smith and all others interested in the conservation of the food power of the country will be welcomed into the contest.—Editor MANUFACTURERS RECORD.]

### Every Suggestion in This Letter Correct, and Should Be Heeded.

F. W. KEENEY, Oklahoma City, Okla.

The press throughout the country has been doing a wonderful work in stimulating the production of food in the city gardens and on the farms.

There is yet another work which should be taken up by the press at once, and that is, an appeal to every person in the United States to be more economical in their consumption of food and all kinds of material.

We might compare the world to a large beehive, which is made richer by the individual effort of each bee.

Unfortunately, at this time a great many of the bees, or men, have ceased to produce, and, on the other hand, are destroying all kinds of foods and materials at such a rapid rate that it is requiring all of the energy of several hundred million more men and women to keep

them going. Hence after three years of this unprecedented destruction (war) the world has come face to face with a shortage in every conceivable way. General high prices are the result, and will most likely rule for some time to come.

In this war for humanity and liberty everyone should try to do something to help. As a rule, the rank and file of the armies are composed largely of men of very moderate means. But there is a big work for the non-combatants to do. No matter if the non-combatant could easily afford to buy food and all material which he consumes at the present high prices, he should do so only in the most limited way, and under no circumstances permit any waste.

Those who can afford to continue living in their former easy extravagant way should at this time practice the strictest economy; otherwise, they will be helping to deplete the resources of the nation and inflict an untold burden upon those who are fighting the country's battles.

This appeal should go home to everyone. We should all stop and consider the many ways in which we can reduce our consumption of that which others have produced for us. In this way everybody can help win the war. Let everybody do something along this line, and great results will be accomplished.

### Co-operative Plan Proposed by Which Wage-earners Might Become Food Producers.

ALFRED WILLEY, Laurel, Miss.

I have been reading your publication with much interest, especially articles regarding the cut-over land of the South. In your issue of May 3 Mr. L. C. Green of Atlanta, Ga., urges young men to buy land and raise something to eat. He says: "There are too many young, able-bodied men working in stores, factories, offices, etc., not knowing at what hour they will be let out."

Every mechanic, clerk and average wage-earner is fully aware of these facts, and fully 50 per cent. of them over 35 years of age would be glad to retire to a farm or piece of ground to make a farm of could he afford to do so; but it takes more real money to farm than it does to start a respectable mercantile business, and the fear of failure before he gets settled deters him from starting.

But suppose that the mills and men who own this cut-over land would allow it to be farmed on the unit plan, as, say, 100 workingmen with an earning capacity of, say, \$60 per month, could be induced to put \$5 per

month into a mutual investment fund based on 2000 acres of cut-over land, making it a basis of 20 acres each for the 100 investors, the payments to run 60 months, making a total of \$300. As soon as the notes are signed and payments to the company begins, let a man be hired who understands the clearing of land and farming, give him enough labor to accomplish things, clear the stumps out in 100-acre strips, then cultivate in marketable crops, to be sold to the best advantage as produced. The company would have a potential capital of \$30,000, which could be used to do things in a big way. At the end of 60 months then the investor would have a 20-acre unit in the 2000-acre farm ready to go onto with the pioneering done, and could have stuck to his job while doing so. Cut-over land can be purchased in suitable tracts at \$5 per acre; when cultivated and stumped it has a selling value of from \$50 to \$75 per acre, besides, the crops raised would more than pay for the improvements made, especially if cattle and hogs were raised and a small cannery installed.

Now, if some firm or corporation will initiate this scheme and give the workingman a fair show, so that he won't be swindled out of his investment, I know many who would be anxious to go into a scheme of this kind; but it must be shown they will not be welshed in the final wind-up by some unscrupulous real-estate shark. Let Mr. Green or some firm with the backing and land put this in operation and see a rush to join the farm makers, who would be not only raising foodstuff for the country, but making a home for himself and furnishing an example for others.

### Chinese and Japanese Labor Suggestion Endorsed.

CHAR. F. COLE, President Virginia Machinery & Well Co., Richmond, Va.

We have read with a good deal of interest your editorial regarding Chinese and Japanese labor. The writer has for a long time thought this would be the proper solution of the labor problem. While he is not conversant with all the conditions surrounding such a problem, it would certainly seem correct under the existing conditions. We are glad that you have the courage to take up the matter in this way.

### Tampa's Boat-Building Campaign.

A. N. JACKSON, Gary, Tampa, Fla.

We have a great deal going on here in building boats for the Government, which were begun on suggestions of your Mr. Edmonds, who is Florida's best friend and a real friend to all the South.

# The Iron, Steel and Metal Trades

## STEEL WAREHOUSE STOCKS LOWEST IN TWENTY YEARS.

Consumers' Supplies Also Near Depletion—Unnecessary Deliveries to Be Postponed—Sales of 150,000 Tons of Pig-Iron Since May 1.

New York, May 14—[Special.]—An excessively heavy demand from domestic consumers for all kinds of rolled steel products for various shipments next year was reported from the steel mills in all parts of the country last week. In fact, the steel situation, as far as domestic buyers are concerned, is fast approaching a very serious climax. Both jobbers and consumers report that surplus stocks carried in their hands are the lowest in 20 years. This is due to the fact that the mills have been unable to make shipments on contract time.

The mills are being called upon to furnish an analysis of their tonnage obligations. Various classes of those steel buyers whose operations are not essential to the conduct of the war will be designated as having the privilege of making sacrifices for the common good.

Government allotments of steel continue to come along, the total placed to date amounting to about 750,000 tons, with 300,000 tons or so to follow in the near future. This is apart from steel that the Government will purchase for its European Allies, possibly a still larger tonnage. While it is generally believed that the Government will in some way act for its Allies in securing the purchase of war munitions in this country, independent new inquiries last week appeared in the market for nearly 150,000 tons of shell steel bars for export early in 1918.

Although the tinplate mills are refusing to consider additional orders for marine shapes and plates, foreign inquiries last week came in at the rate of from 2000 to 6000 tons a day. Domestic shipyards also endeavored to place filling-in contracts for lots of from 2000 to 3000 tons each, shipments to be made this year, irrespective of price.

As yet the Government has not announced officially as to what prices will be determined upon for the steel to be purchased by the Government for our Allies. All opinions expressed in the trade thus far have been simply guesswork, based upon what has been done in previous purchases of steel and copper. It is generally conceded, however, that these "past performances" offer no logical base upon which to found a prediction, as the computing methods will be entirely different.

The steel trade was much interested last week in the announcement of the Navy Department that it will suspend the construction of capital ships to afford greater facilities to increase the merchant marine, with steel-built craft as well as with wooden cargo boats. As a preliminary step to put such a program into effect the department is withholding awards on three battleships. It is also contemplated to temporarily suspend construction on five battle cruisers that have not been laid down in the ways.

The present capacity of structural plate and bar mills is fully ample to meet the requirements of the shipyards engaged in either Government or private contracts. The United States Steel Corporation alone produced 2,400,000 tons of plates and shapes and 2,000,000 tons of bars last year, and this production could be increased if necessary. The independent mills together could produce as much again as the Corporation's subsidiaries, so that nearly 5,000,000 tons of plates and 4,000,000 tons of bars could be produced in a year.

The Russian Government sent out definite inquiries last week for 1000 locomotives, and it is understood that it needs 2000 more. The placing of these orders, as well as those for cars, is likely to be postponed until Russia receives the loan she expects from this country. Payment for these locomotives, however, is guaranteed by the British Government, and in the event of a separate Russian peace with Germany the manufacturers would have this guarantee to fall back upon.

As previously reported, the sheet and tinplate, wire and pipe subsidiaries of the United States Steel Corporation are out of the market, and now the Carnegie Steel Co. is nearly altogether out of it. Following six-point advances in pipe announced by independent man-

ufacturers as effective on May 1, the National Tube Co. withdrew from the market last week.

Unfinished steel continues to show an advancing tendency. Sheet bars have led billets through the buying of sheet consumers, who find they can have sheet bars converted at a price. Sales above \$80 last week included 3500 tons at \$85 and 7000 tons at \$90, in various lots.

Domestic consumers of pig-iron in all districts have placed contracts aggregating 150,000 tons for various shipments over the last half of the year and over the first half of 1918 since May 1. Inquiries are still in the market for 150,000 tons of foundry and steel-making grades, half of which is for export. Among the domestic consumers who have contracts are railroad equipment and agricultural implement manufacturers, malleable foundries, makers of machinery and steel plants. In the past few days inquiries of 40,000 tons of basic and 30,000 tons of standard Bessemer iron have come from steel plants in the Central West. Export inquiries for Bessemer and basic are equally heavy, but at the same time a number of resale lots of Bessemer, previously sold for export, are on the market, one lot of 14,000 tons being offered on Friday for prompt shipment without being able to find a buyer. The lack of ocean ships to carry the pig-iron abroad is held as responsible for the resale lots, which are often available at \$1 to \$2 per ton under the prices current in the domestic market.

Malleable Bessemer and high silicon iron is scarce on the market for this year's shipment, but there is an ample supply for delivery over the first half of next year. Several manufacturers of agricultural implements at Albany, Troy and Syracuse, N. Y., and in Canada, came into the market late last week. Railroad equipment manufacturers are also negotiating for charcoal foundry and basic iron. Although few export contracts are being placed, foreign consumers continue to constantly put out new inquiries in the hope of being able to secure a portion, at least, of their requirements. Japan, being most favorably situated to secure shipments, has taken the bulk of the iron sold for export. Italy is an insistent inquirer, while few of the inquiries from Switzerland, Norway and Sweden, amounting to 20,000 tons in the past few days, are being satisfied.

### (Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$80.00—\$85.00
Open-hearth sheet bars.....	80.00—85.00
Bessemer sheet bars (nominal).....	90.00—
Forging billets.....	100.00—110.00
Wire rods.....	90.00—95.00
Rails.....	60.00—61.00

### (Dealers' average buying prices for pound lots.)

Tank plates.....	\$4.50—\$8.00
Steel bars.....	3.50—3.75
Refined iron bars.....	3.75—
Steel hoops.....	4.00—4.50
Cold-rolled strip steel.....	7.50—8.00
Sheets, No. 28 gauge.....	6.50—7.00
Galvanized sheets.....	8.00—9.00
Wire nails.....	3.50—
Cut nails.....	3.50—
Plain fence wire, base.....	3.45—
Barb wire, galvanized.....	4.25—
Railroad spikes.....	3.85—

### PIG-IRON.

Bessemer, Pittsburgh.....	\$44.95—\$45.95
No. 2 foundry.....	43.95—
Basic, valley.....	42.95—
Gray, forge.....	42.95—
Basic, Philadelphia.....	40.95—42.00
No. 2 foundry, Northern.....	42.75—44.75
Low phosphorus.....	75.00—78.00
No. 2 foundry, Buffalo.....	43.00—46.00
No. 2 South, Cincinnati.....	38.90—40.90
Northern foundry, No. 2 Cleveland.....	41.30—42.30

### SCRAP-IRON AND STEEL.

Heavy melting steel.....	\$28.00—\$29.00
Old iron car wheels.....	25.00—26.00
Old steel car wheels.....	31.00—32.00
Steel car axles.....	45.00—47.00
Iron car axles.....	45.00—47.00
Low phosphorus.....	38.00—39.00
No. 1 cast scrap.....	24.50—25.00
Heavy cast scrap.....	21.00—22.00
No. 1 railroad wrought.....	30.00—31.00
Cast borings.....	15.00—15.50
Machine-shop turnings.....	14.00—14.50
Railroad malleable.....	22.50—23.50

## Birmingham Market Strong at Advancing Prices—Car Shortage Remains Acute.

Birmingham, Ala., May 15—[Special.]—Pig-iron market conditions in the Southern territory show further strength, notwithstanding the railroads are not furnishing sufficient cars and locomotive power for deliv-

eries. Inquiries are numerous, but in the main the business accepted is in small lots. Regular customers are still finding some little iron for delivery during the last half of the year. Iron has sold as high as \$42 per ton the past week in the Birmingham district—high silicon, special brand and special analysis irons. For first half of the coming year delivery No. 2 foundry standard iron is being quoted at \$36 per ton, and continued absence of worry about future business is noted.

The acute car situation that has been on for two weeks and longer shows little change. Some of the smaller iron companies report shipping out iron right along, but the larger manufacturers are greatly concerned over the inability to make deliveries as promptly as they would like to. Iron and coal men of the Birmingham district during the past week held conferences with the higher officials of railroads of this section in the hope of providing some relief in the situation. E. H. Coapman, vice-president of the Southern Railway, in charge of operations, was among the railroad officials who came to Birmingham for the conferences and heard at first hand the complaints as to the service that was being given to the coal, coke, iron and steel producers of this section.

Many of the smaller foundries are making efforts to get pig-iron, and in some instances are succeeding, a carload or two at a time being purchased with delivery stipulated for the near future. Several inquiries for round tonnages of pig-iron have been received in this district, and reports of an export order or two are again in circulation. Among deliveries being made now is some export business booked many months ago.

Production in the Birmingham district is steadily improving, and estimates for the present month are around 260,000 tons. The Gulf States Steel Co. has the little Eagle furnace at Attalla in operation with a daily production of 40 tons basic iron. The charcoal ovens at this furnace are in operation, but the charcoal is being sent to the Rock Run (Ga.) furnace for charcoal iron. The Gulf States Steel Co. is using by-product coke. The Sloss-Sheffield Steel & Iron Co.'s iron make is normal again, with six furnaces going. This company is now getting some coke from its old beehive ovens adjoining the city furnaces, and within another 30 days expects to have all of its 288 ovens in full commission. Work on two furnaces by the Tennessee Coal, Iron & Railroad Co. at Bessemer is being rushed.

Melt of iron in the home territory shows but little change, save perhaps a slight increase. Cast-iron pipe-makers have the same number of pits in operation, and shipments of pipe and foundry and machine shop products are steady. Through construction of canning plants in the South and the use of veneering for boxmaking veneer machinery makers of this district have increased their activities, and the little industry at Woodlawn, a part of Birmingham, has bookings now in hand in this line that will give several weeks' steady work with other business in sight. Other smaller consumers of pig-iron in the Southern territory as well as elsewhere apparently are feeling some impetus in business, as efforts are being made to get a car lot or so of iron.

Steel-mill operations show absolutely no change, and maximum production is being sought on all sides. Statements ament business—domestic, export or Government—are positively withheld, the only suggestion given out being there will be no change in the operations. Labor at steel plants is being urged to give best service, and in some instances there are reports of slight scarcity of labor. Inasmuch as the wire plants have big contracts in hand, so far as can be learned here it makes but little difference as to the proposed advances in prices as announced a short while since by independent manufacturers but not followed by the Corporation.

Quotations in the South are given as follows:

### PIG-IRON.

No. 1 foundry and soft.....	\$36.00 to \$38.00
No. 2 foundry and soft.....	35.00 to 36.00
No. 3 foundry.....	32.00 to 33.00
No. 4 foundry.....	30.00 to 31.00
Gray Forge.....	28.00 to 29.00
Basic.....	35.00 to 36.00
Charcoal.....	40.00 to 42.00

### OLD MATERIAL.

Old steel axles.....	\$35.00 to \$36.00
Old steel rails.....	22.50 to 23.50
No. 1 wrought.....	25.00 to 26.00
Heavy melting steel.....	20.50 to 21.50
No. 1 machinery.....	22.00 to 23.00
Car wheels.....	20.00 to 21.00
Tramcar wheels.....	20.50 to 21.50
Stove plate.....	13.50 to 14.50
Shop turnings.....	8.50 to 9.50



## METAL MARKETS WORKING TO HIGHER LEVELS.

### Copper Firmer and More Active—Lead and Spelter Show Advancing Tendencies—Tin's Statistical Position Improved.

New York, May 14—[Special.]—The copper market was firmer last week, and more active than it has been for some time. Lake and electrolytic were sold in small quantities for immediate delivery at 32½ to 33 cents a pound. About 30,000,000 pounds was sold during the week for third quarter delivery at a fraction less than 29 cents. Consumers are purchasing more or less of the red metal every day, and although there are no large transactions, compared to those of last year, the dealings from the first of the month represent a substantial tonnage. Resale copper was withdrawn from the market last week. The outlook now appears favorable to the development of a considerable buying movement during the next two or three weeks.

A careful canvass of the trade shows that a decided change of sentiment has taken place within the past 10 days. Consumers are evincing a stronger disposition to buy and cover their future requirements. Producing interests are confident that consumption still is in excess of production. Lack of supplies—not copper, but material needed in running the plants—has constituted a retarding factor in refinery operations. Inefficiency of labor has also played a strong part. At one plant it has required 30 hours instead of the customary 24 to complete one link in the chain of the refining process.

There was no change in the position of lead last week. The market continued to maintain its firm position, and buyers showed more confidence than heretofore, judging from the inquiries that were received. Pending an official announcement concerning the Government's requirements and a definite understanding as to price, the larger producers and consumers alike are holding off. The former are unwilling to enter into

engagements until they know to what extent they may be called upon to fill Federal requirements, and the latter until they get a line on the price. The undertone of the market, however, was firm. As it is generally expected that the agreement reached with Washington will come reasonably close to the outside market, the chances rather favor an advance, in view of possible heavy withdrawals to meet Government needs.

While the spelter market was somewhat dull throughout the week, prices held steady, and an advancing tendency was indicated. Those sellers who wanted orders accepted business for May and June at 9.12½ cents, St. Louis, while others, who held out for 9.25 cents, only picked up an occasional order. The future positions are attracting more attention. The attitude of both buyers and sellers appears to be to await developments, but while this makes a dull market the high cost of production gives it an underlying support, which is evidenced in the fact that prices for futures are nearly as high as those for prompt shipments. The argument has been advanced in the trade that, although the production of spelter has lately been in excess of the demand, the further requirements for war purposes may be greater than at present anticipated. It would, therefore, be a public misfortune to allow the price to decline to a point where the production would have to be heavily curtailed.

While the statistical position of tin was improved last week by recent arrivals, which have brought the total since May 1 up to 1000 tons, the effect was probably offset less by a constant advance in the London market. There were no futures offered. The undertone of the market, however, must continue strong, and a further advance should cause no surprise in view of the shortage in the world's supply, the difficulty of getting a sufficient proportion of tin ordered to meet the market's requirements, the risk of shipment and the high prevailing prices of insurance. Some Banka tin came forward last week, but did not meet the market's requirements sufficiently to improve the general situation.

#### THE WEEK'S PRICES.

	Copper		Lead		Spelter.	Tin.
	Lake.	Electrolytic.	A. S. & R. C.	Independent.		
Monday, May 7.....	31.50-32.50	32.00-33.00	9.50	10.00-10.50	9.30-9.42½	59.00
Tuesday, May 8.....	31.50-32.50	32.50-33.00	9.50	10.50-	9.30-9.42½	59.50
Wednesday, May 9.....	32.00-33.00	32.50-33.00	9.50	10.50-	9.30-9.42½	63.00
Thursday, May 10.....	32.00-33.00	32.50-33.00	9.50	10.50-	9.30-9.55	64.00
Friday, May 11.....	32.00-33.00	32.50-33.00	9.50	10.50-	9.30-9.55	64.25

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### GULF, FLORIDA & ALABAMA IN COURT.

#### Receivership to Protect the Railway and Accomplish Its Extension.

As a result of proceedings in equity instituted by creditors, the Gulf, Florida & Alabama Railway, 143 miles long from Pensacola, Fla., to Kimbrough, Ala., has been placed in the hands of receivers, F. E. Dewey of Boston being appointed to operate the road, with Philip D. Beall of Pensacola as co-receiver. Counsel in the case say that the receivership is constructive and for the purpose of making the property a paying proposition. They are H. C. Mandeville of Elmira, N. Y., and Liston L. Lewis of New York city. It is said that the road lacks rolling stock sufficient to take care of the freight offered to it, and that arrangements have been made to purchase from the Lackawanna Railroad 300 wooden freight cars which that company is replacing with steel cars, but which are still in excellent condition. It has nine locomotives. The receivers have applied to the court for authority to issue \$500,000 of certificates, the proceeds to be used to pay for the new equipment and to some extent cover operating expenses until things get going right. A small machine shop is to be established at Pensacola.

It is further stated in a report from Pensacola, where the headquarters of the road are situated, that there has not been any default in the payment of interest on the company's bonds, which consist of \$4,410,000 of first mortgage 5 per cents, but that, anticipating default in July, the legal action has been taken as a protective

measure. A suggestion that the road might be acquired by one of the large systems was denied by counsel, who said that no other company was interested in the proceedings.

Mr. Mandeville is reported saying that the road paid \$25,000 last year for the rental of cars, but that this (which would be saved this year through the acquisition of more cars) was too much of a load for the road to carry; its gross earnings did not warrant such expenditures. Besides buying equipment, the purpose is also to enlarge the terminal facilities at Pensacola, building tracks to several industries, besides doing other work elsewhere on the road.

The officers of the line are: President, Newton P. Hutchison of Providence, R. I.; first vice-president, John T. Steele of Buffalo, N. Y.; second vice-president, Wm. H. Knowles of Pensacola, Fla.; secretary, Philip Sawyer of Elmira; treasurer, F. S. Stranahan of Providence; general manager, J. P. Smith of Pensacola. The first five officers are also directors.

The railroad was built by Roy C. Megargel of New York, who started the enterprise in 1911 and used the line of the Southern States Lumber Co., running from Cantonment, Fla., to Local, Ala., 64 miles, as a nucleus.

It is the purpose of the owners to further extend the road to Jasper, Ala., as already planned, which would require about 125 miles of new construction. It connects with both the Southern Railway and the Louisville & Nashville Railroad, and it was thought that the latter might acquire it.

#### Telephones Superseding Telegraph.

The Southern Railway Co., which for some time has been using telephones for train dispatching on its main line from Washington, D. C., as far as Spencer, N. C., 335 miles, has decided to employ them in like manner from Spencer to Atlanta, Ga., 314 miles, and it has authorized the construction of two copper wire telephone

circuits between those points, which when completed will put the whole line from Washington to Atlanta, 649 miles, under operating control by means of telephones. Gangs of men will be organized immediately for the work, which will be done under the supervision of the superintendent of the company's telegraph, whose office is at Charlotte, N. C.

The completion of this through line of telephone wires will furnish not only train dispatching facilities, but message circuits, between the two principal cities and intervening points, and it will also provide a third or "phantom" circuit for general talking purposes and a simplex telegraph circuit between the company's offices at Washington, Charlotte and Atlanta, besides important division and junction points, such as Monroe, Va.; Greensboro and Spencer, N. C.; Hayne and Greenville, S. C.

In announcing this improvement the company says that, as compared with the telegraph, the telephone has several advantages. Service is quicker, and it is easier to prevent errors. As he sends the order the dispatcher writes it, spelling out all figures which give train numbers, engine numbers and time, and the receiver, as he receives it, also writes it down and finally repeats it to the dispatcher, similarly spelling out all figures. Moreover, the telephone puts the sender and receiver in close touch with each other, and the dispatcher, if necessary, can personally talk to either the conductor or the engineer of any train on his division.

### TO RELIEVE CAR SITUATION.

#### Increased Demurrage and Delay Rates for Shippers and Roads, Respectively.

Jackson, Miss., May 15—[Special.]—A decision which is expected to have considerable bearing on the car shortage in Mississippi has been handed down by the State Railroad Commission. It puts into effect immediately an increased schedule of demurrage and delay rates, and is expected to discourage unnecessary holding of cars by either shippers or railroads.

The new charges are \$2 a day for the first five days for each car, and \$5 a day thereafter. Demurrage and delay begin to accumulate at the end of 48 hours, the delay rates being the same as demurrage.

Car shortage is crippling the yellow pine lumber industry in the State, as the great mills in South Mississippi have their yards piled high with stock, which they are unable to move, and the new demurrage rates may help to relieve these conditions.

Lumber prices are high, and the demand is brisk, but cars are scarce, and the exodus of negro labor, which continues, is growing more serious.

### Illinois Central Annual Report Shows Increases

In the annual report of the Illinois Central Railroad Co. for the year ended December 31, 1916, and which has just been issued, President C. H. Markham says to the stockholders:

"As a result of the increased activity in practically all lines of business, the traffic of your company surpassed in volume that of any previous like period in its history. These unusual conditions were not only reflected in the increased revenues of the company during the year, but also affected the expenses adversely, in that the prices of practically all material entering into the maintenance and operation of your properties were greatly increased. There was also a substantial increase in the amounts paid for taxes this year as compared with the previous year.

"The policy followed in recent years of steadily improving the standard of your road and equipment enabled the management to take care of the largely increased traffic more successfully and with greater economy than would otherwise have been possible. As an illustration of the increased efficiency due to the introduction of more powerful equipment and the improvement of the roadbed, it will be noted that the average tons of all freight carried per revenue freight train mile has increased from 459 tons for the year ended December 31, 1912, to 624 tons for the year ended December 31, 1916, each intervening year showing a steady improvement over its predecessor."

Construction of new mechanical facilities at Louisville, Ky., consisting of a roundhouse, an office building,

a machine shop, a power-house, a paint shop and a turntable was begun during the year. Block signals are being installed at various points on the Mississippi and Louisiana divisions, and upon completion of this work the line between Chicago and New Orleans will be completely block-signalled. An electric interlocking plant is being installed at Rockport, Ky. Much other improvement work was also done at many other points on the system.

The income account of the system shows total railway operating revenues \$73,740,266.32, increase as compared with \$1915, \$9,936,187.10; total railway operating expenses \$52,843,149.47, increase \$3,823,207.82; net revenue from railway operations \$20,897,116.85, increase \$6,112,979.28; railway operating income after tax accruals and uncollectible railway revenues \$16,750,239, increase \$5,267,005.91; gross income \$28,016,159.42, increase \$8,227,545.27; net income \$15,868,282.75, increase \$7,958,342.49; income balance transferred to credit of profit and loss \$15,707,493.03, increase \$7,953,605.54.

### Girls and Women for Railroad Work.

To aid in conserving labor, made necessary by the war, the management of the Pennsylvania Railroad has decided, wherever possible, to employ girls and women. Steps will be taken to engage and train a reserve force of women employees who will be available should any crucial situation develop.

With this object in view, every general superintendent on the Pennsylvania lines east of Pittsburgh has been directed by Elisha Lee, general manager, to investigate and report, as promptly as possible, those capacities in which girls or women can be efficiently employed on the railroad; the number that can be so utilized, and the extent to which they can perform work now being done by men.

The object of this is to release men from work that can be as well done by women, and thus increase the number of male employees available for forms of railroad service for which women are not well adapted, and also to prepare for the military adoption of the selective draft, which would considerably deplete the force of male employees not actually engaged in the physical operation of the railroad.

No men will be dismissed to make way for women, although some may be asked to change the form of their occupation.

Stenography, typewriting and practically all other kinds of clerical work will be open to women immediately at all offices where large clerical forces are employed.

The investigation will also be directed to ascertaining whether or not girls and women may be advantageously employed in the lighter forms of machine-shop work, telegraphy, telephony, signalling, train dispatching, ticket selling and car cleaning.

For several months the experiment of employing women in some of the larger offices at Broad Street Station, Philadelphia, has been tried, with very successful results thus far. These experiments have been confined to clerical work.

### Marshall & East Texas Railway Sale.

A letter from Gilmer, Tex., to the MANUFACTURERS RECORD says that Judge Gordon Russell of the Federal Court has fixed an upset price of \$500,000 for the Marshall & East Texas Railway, which, under receivership proceedings, is to be sold at Marshall, Tex., on July 3, and also that H. B. Marsh of Tyler, Tex., has been appointed master to conduct the sale. A citizens' committee, of which W. A. McElroy of Gilmer is chairman, at the request of the master is assisting in the sale.

### Receiver for Road Which Wanted to Cease Operating.

Langbourne M. Williams of Richmond has been appointed receiver for the Tidewater & Western Railroad, a narrow-gauge line 89 miles long from Farmville to Bermuda Hundred, Va., which was formerly known as the Farmville & Powhatan Railroad. Application for the receivership was made on behalf of the road, of which he was president, pending a decision of the State Corporation Commission on an application which the

company had filed with it asking to be allowed to discontinue operations, as the line was a losing proposition, owing to the increased cost of materials and supplies required by the property, but with no increase of its freight rates. A statement published says that operations for the last ten years display a deficit of \$72,000, notwithstanding that the gross receipts for that period amounted to about \$895,000.

The Corporation Commission issued an order that the railroad should continue to operate its trains, this action being taken because it was informed that the directors had decided to cease operation last Saturday. It was further stated that the railroad had made a contract to sell much of its property, including the rails.

T. M. R. Talcott, vice-president and general manager, was named as agent for the receiver.

### Western & Atlantic New Lease Signed.

The new lease of the Western & Atlantic Railroad, which is owned by the State of Georgia, to the Nashville, Chattanooga & St. Louis Railway Co., has been signed by Governor N. E. Harris for the State and by President John Howe Peyton for the railway company, but it will not take effect until December 27, 1919, when the old lease expires.

Under the new lease the State will receive a much larger rental for the Western & Atlantic Railroad, which, by the way, is 137 miles long from Atlanta to Chattanooga. The old lease provides for the payment of \$35,001 each month; the new lease provides for a monthly payment of \$45,000, and the lessee must also spend at least \$60,000 a year for improvements to the property. Certain property in Chattanooga included in the old lease is not included in the new one, and this property, it is estimated, would yield \$15,000 a year rental to the State of Georgia should it prefer to hold instead of sell it. On this land are located the Eastern Hotel and the Southern Express Co. buildings. The new lease is for 50 years; the old one for 29 years.

The Western & Atlantic Railroad was built by the State of Georgia between the years 1841 and 1850.

### \$600,000 to Improve Power Plant.

The Roanoke Railway & Electric Co. of Roanoke, Va., is improving and enlarging its Walnut street power plant, and, according to a report from there, about \$600,000 will be expended. The horse-power output will be increased from 6000 to 19,075, which, it is said, will take care of some new industries, besides providing a surplus of power for meeting increased demands from time to time.

A large addition to the power-house is being erected to house the new machinery. This is of steel, brick and concrete. A brick smokestack is also being built to accommodate four new furnaces and boilers that will be installed. They will be equipped with underfeed stokers. A draft fan of 100 horse-power has also been put in. Two large electric generators have been purchased, and foundations are being prepared for them. Three transformers have also been bought.

### Truck Gardens for Railroad Employees.

The Atlantic Coast Line Railroad Co. has authorized the use of vacant land belonging to it at various points on its extensive system for agricultural purposes by its employees. Any employee desiring to take advantage of this opportunity to provide himself and his family with a truck garden without being obliged to purchase land for the purpose must apply to the division superintendent for permission to use it, and he will, it is said, be duly allotted his share of ground.

### Seaboard Opening Up New Florida Country.

The Seaboard Air Line, which last year built an extension of 10 miles on its Plant City branch to a terminus called Walinwa, about 14½ miles east of Lake Wales, Fla., has let a contract to A. E. Langford of Valdosta, Ga., to build a further extension of five miles from Walinwa in a general easterly or southeasterly

direction to reach a section of new country not having other railroad facilities. This entire new work of 15 miles is known as the Kissimmee Valley extension, and it may be still further extended in order to meet the needs of the region that it penetrates. It lies in Polk county, and the railroad construction is going in the direction of Lake Kissimmee and the Kissimmee River.

### Would Increase Capital for Improvement.

The Savannah & Atlanta Railway, which is the name of the extension of the Savannah & Northwestern Railroad that the latter built from St. Clair to Canak, Ga., about 36 miles, has applied in Georgia for an amendment of charter to permit an increase of \$1,250,000 in its capitalization, which would make the total \$2,250,000. It is said that the increase is for the purpose of development and betterment. J. H. Hunter of Savannah is president.

### New Equipment.

Pennsylvania Railroad has ordered 70 locomotives from the American Locomotive Co. and the Baldwin Locomotive Works. Each will build 35. They are for the Lines West of the system. The railroad is also building at its own shops, Altoona, Pa., 25 all-steel cars for heavy service for the Federal Government. Each car will be of 200,000 pounds capacity.

Norfolk & Western Railway is reported in the market for 30 Mallet type locomotives.

Southern Railway has ordered 2 eight-wheeled switching locomotives from the Baldwin Locomotive Works.

Nashville, Chattanooga & St. Louis Railway has ordered 10 Mikado type freight locomotives from the Baldwin Works.

### Railway Development Officers.

At the recent convention of the Railway Development Association, held at Louisville, Ky., officers were elected for the year as follows: President, R. W. Cook of the Pennsylvania Railroad; first vice-president, H. O. Hartzell of the Baltimore & Ohio Railroad; second vice-president, A. D. Knox of the Nashville, Chattanooga & St. Louis Railway; secretary and treasurer, D. C. Welty of the St. Louis, Iron Mountain & Southern Railroad. The association is composed of the agricultural, immigration and development agents of the various railroad companies.

### Practical Move in Favor of River Traffic on the Mississippi.

A practical move toward reviving traffic on the Mississippi River has been taken by the Aluminum Company of America, according to announcements from St. Louis and Little Rock, Ark. A fleet of 14 steel barges has been constructed for the company, with which bauxite ore from the Arkansas mines will be transported to the company's plant in East St. Louis. The barges represent an investment of about \$500,000. Five barges, carrying approximately 6000 tons of ore from Bauxite, Ark., were loaded last week at Memphis, and it is the expectation that the barges will make delivery to East St. Louis of from 7000 to 10,000 tons weekly. The time between Memphis and St. Louis is expected to average about four or five days.

It is stated that the use of water transportation was adopted partly because of the shortage of cars and also and principally because the Aluminum Company and its officers are supporters of the movement to revive traffic on the Mississippi River.

### Leather Wanted for Java.

LEDER MAGAZIJN, OELKIAN TJIANG, Pasar Besar 99, Soerabaya, Java.

I am interested in the import of finished leather, such as boxcalf, glaze, enameled leather, drill, etc., and shall thank you to have my name advertised in your paper. Please forward me a copy of your journal, for which I am today sending you a money order. For my reference, make inquiries of Stevenson & Howell, 95a Southwark street, London, E. C.



## Good Roads and Streets

### SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

#### Bonds Voted.

Bartow, Fla.—Polk county voted \$150,000 bonds to build hard-surfaced roads.

Boone, N. C.—Watauga county voted \$300,000 bonds to construct roads.

Dadeville, Ala.—Tallapoosa county voted \$245,000 bonds to construct roads, etc.

Martinsburg, W. Va.—City voted \$115,000 bonds to pave streets with brick and asphalt macadam.

Thomasville, Ga.—City voted \$160,000 bonds to pave streets and sidewalks, etc.

West Palm Beach, Fla.—Palm Beach county will issue \$11,500 bonds for road and bridge construction.

White Bluff, Tenn.—City voted \$5000 bonds for street work.

White Bluff, Tenn.—City voted \$5000 bonds to improve streets.

Williamson, W. Va.—Mingo county voted \$1,000,000 bond issue to construct roads.

#### Bonds to Be Voted.

Benton, Mo.—Scott county votes June 9 on \$800,000 bonds to construct roads, etc.

Kissimmee, Fla.—Osceola county votes June 16 on \$100,000 bonds to construct roads.

Springfield, Tenn.—Robertson county will vote on \$150,000 bonds to improve roads.

#### Contracts Awarded.

Asheville, N. C.—City awarded contract for 25,000 yards asphaltic concrete on old macadam and 10,000 yards sheet asphaltic concrete base.

Barnesville, Ga.—City awarded contracts for street paving to cost \$45,000.

Beckley, W. Va.—Raleigh county awarded contracts for 70 miles of road.

Clarksburg, W. Va.—Harrison county awarded contract for 1½ miles of road to cost \$42,000.

Franklin, Ky.—Simpson county awarded \$13,000 contract to construct 3½ miles of road.

Hagerstown, Md.—Washington county awarded contract at \$33,195.25 for constructing macadam road.

Kansas City, Mo.—City awarded \$101,561 contract for street improvements.

Knoxville, Tenn.—City awarded \$41,590 contract for street improvements.

Leakesville, Miss.—Greenville county awarded \$50,278.42 contract for highway construction.

Tavares, Fla.—Lake county awarded contract at \$50,000 for constructing 25 miles of roads.

Texarkana, Ark.—Miller County Highway and Bridge District awarded contract at \$489,256.57 for constructing 68-mile highway.

#### Contracts to Be Awarded.

Baltimore, Md.—City receives bids until May 23 for 20,800 square yards sheet asphalt, 9750 linear feet armored concrete curb, 1450 square yards brick gutter and 50,000 cubic yards grading.

Earlington, Ky.—City receives bids until May 25 to improve State-aid road; 6300 cubic yards earth excavation, 4086 cubic yards macadam, etc.

Forrest City, Ark.—St. Francis county will construct 40 miles of road; \$200,000 available.

Greenville, Miss.—Washington county will surface with concrete, warrentite or asphaltic concrete 92,000 square yards of highways.

Laurens, S. C.—Laurens county will construct 200 miles of roads.

Linden, Ala.—Marengo county will repair five miles of gravel road and gravel two-mile extension of same road.

Maynardsville, Tenn.—Union county asks bids until June 21 to construct macadam roads; cost \$50,000.

Mountain City, Tenn.—Johnson county will build 70 miles of road.

Pickens, S. C.—Pickens county will construct sand-clay and topsoil roads; \$250,000 available.

Russellville, Ark.—City will construct 5380 square yards concrete, asphalt macadam or tarvia paving.

Tazewell, Va.—City will pave 15,000 square yards of streets with bituminous macadam or concrete.

Waldron, Ark.—Scott county will construct 30 miles of macadam highways costing \$160,000.

Yadkinville, N. C.—Yadkin county asks bids until June 5 to construct 27 miles of sand-clay roads.

### Road Contract for Nearly \$500,000.

Contract has been awarded at \$489,256.57 for the road construction, providing 68 miles of highway, for which proposals were recently invited by the Miller County Highway and Bridge District, Louis Josephs, secretary, Texarkana, Ark. This contract was secured by the Womack Construction Co. of Sherman, Tex., Lund & Hill of Little Rock and Christian & Ayres, Texarkana, being the engineers.

### Paving Bonds for \$115,000.

Bonds to the amount of \$115,000 have been voted for paving streets with brick and asphalt macadam at Martinsburg, Va. P. W. Leiter, Mayor, will give prompt attention to the preparation of plans and specifications, so that proposals may be invited.

### To Build 200 Miles of Road.

Laurens county, South Carolina, which recently voted road bonds to the amount of \$300,000, is to be improved with 200 miles of permanent highways, and the Highway Commission will select an engineer on May 24. H. B. Humbert, Laurens, S. C., is the supervisor.

### \$1,000,000 Bonds for Building Highways.

Extensive road construction will be undertaken in Mingo county, West Virginia, the proposed \$1,000,000 bonds having been voted. The county commissioners, county-seat at Williamson, will at once arrange issuing the bonds and for building highways.

### Road and Bridge Bonds for \$245,000.

Bridge and road construction to the extent of \$245,000 will be undertaken by the Tallapoosa county commissioners, Dadeville, Ala., the county having voted \$245,000 bonds for this purpose.

## TEXTILES

### Marshall Field & Co.'s Virginia Plans.

Marshall Field & Co. of Chicago advise the MANUFACTURERS RECORD that their engineers are now laying out their proposed townsite near Martinsville, Va., about 25 miles from Spray, N. C., where the corporation is planning to establish extensive facilities for manufacturing textile products. Contracts have been awarded for textile machinery, and plans for mills are being drawn, but a more definite statement will not be obtainable for a few months.

These improvements are in connection with Marshall Field & Co.'s plans to develop 2000 acres of land near Martinsville for an industrial city, including mills for manufacturing cotton cloth and various textile specialties, which will be sold through the Marshall Field stores at Chicago. The company has invested about \$3,000,000 for buildings, machinery, mill villages, public service utilities, etc., at Spray, Draper and Leaksville, N. C., in eight mills having a total of 117,000 spindles,

with 2455 looms, these properties being controlled through ownership of the mill companies. Unconfirmed reports have stated that probably \$1,000,000 will be expended for the Martinsville development and mills.

### Textile Notes.

An increase of capital from \$200,000 to \$300,000 has been decided upon by the Tolar, Hart & Holt Mills of Fayetteville, N. C.

An increase of capital from \$1,000,000 to \$2,000,000 has been decided upon by the Rosemary Manufacturing Co., Roanoke Rapids, N. C., provided from an accumulated surplus. The company does not now contemplate any new additions.

Tucker Mills, J. E. Tucker, vice-president, Baltimore, plan to build an addition for manufacturing automobile tire fabrics. This company was mentioned last week as incorporated with \$100,000 capital and succeeding the Monumental Manufacturing Co., manufacturer of cotton duck and other cloth.

The Philippi (W. Va.) Blanket Mill Co. has been incorporated with \$75,000 capital by E. C. Hall and C. L. Hall of New York, P. D. Campbell, A. L. Baker and W. L. Baker of New York. Officers as follows: Edward C. Hall, president; Phillip D. Campbell, vice-president; C. L. Hall, secretary-treasurer. The plant is established with 1200 spindles and 22 looms for manufacturing blankets, with 50 operatives employed. Daily capacity, 200 blankets.

### Mechanical Engineers to Hold Important Meeting.

The spring meeting of the American Society of Mechanical Engineers will be held at Hotel Sinton, Cincinnati, Ohio, May 21 to May 24. A feature of this meeting will be special sessions on the manufacture of munitions, at which ten papers will be presented and discussed, covering various phases of this question. A joint session has also been arranged with the National Machine Tool Builders' Association, which adds to the importance of this meeting.

As this is the first meeting of the society since the war started, it naturally assumes unusual importance, and far-reaching results are expected from the discussions.

### Drafting Men for the Farm.

H. A. MCGUSTY, Enterprise, Miss.

In your editorial "Present Dearth of Foodstuffs Clearly Foreseen," you claim to have foreseen this dearth as early as last October.

But if you will turn to the article entitled "The Only Solution," in my work on "Cotton Planting," you will see that in the fall of 1914 I was convinced that it was necessary to conscript labor for the farms if we wished to avoid famine. I am sorry now that I made this suggestion, nothing being further from my intention than to help Germany in the war, as the Kaiser promptly adopted my idea and proceeded to use forced labor on the German farms. And unless the United States pursues a policy of drafting the middleman into the army and refusing the farming element, this country is in grave danger of foodstuffs reaching a price which will actually enable the farmer to make a decent living.

We may even see, though this, of course, seems almost incredible, a man getting as much for the skilled labor of food production as he now does for selling silk stockings across a counter.

### Machinery and Materials for Italy.

GIOVANNI ALBERTINI, 10, Via Carducci, Milano, Italy.

I am interested in handling all kinds of raw material and machinery. With respect to latter, would point out that consignments are necessary in all cases, as buyers want to see plainly what they are purchasing. The outlook for selling American goods here is very promising, notwithstanding prevailing times, and I entertain the hope that on resumption of normal conditions American goods will be in great demand and eagerly sought throughout the country.

# Construction Department

## IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

### DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

### BRIDGES, CULVERTS, VIADUCTS

Ga., Bolton.—Fulton County Commrs., Atlanta, let contract Arthur Tufts of Atlanta at about \$20,000 to construct concrete bridge over Southern Ry. near Bolton for pedestrians, vehicles and electric cars; Southern Ry. to pay one-third of cost, county \$10,200 and Georgia Ry. & Power Co. \$3000.

La., Baton Rouge.—East Baton Rouge Parish Police Jury let contract Virginia Bridge & Iron Co., Roanoke, Va., at \$11,200 to construct bridge over Amite River at Benton Ferry.

Miss., Port Gibson.—Claiborne County Supvrs., L. B. Allen, Prest., let contract to Virginia Bridge & Iron Co., Roanoke, Va., at \$17,400, to construct bridge; will erect reinforced concrete arch bridges, 50 to 100-ft. span, contract to be let June 4; will also let gravel road construction contract in July. Lately noted. (See Machinery Wanted—Bridge—Concrete) Construction.)

S. C., Gaffney.—Cherokee County Commrs., Gaffney, and York County Commrs., Yorkville, S. C., will reconstruct inter-county bridge over Broad River; estimated cost \$24,000; probably let contract June 13.

Tenn., Pulaski.—Giles County Commrs. will construct steel bridges across Richland Creek at Wilkinson's Ford; cost \$3000.

Va., Hillsville.—Carroll County will construct steel bridge 51 ft. long over Lovell's Creek near Spears Mill; bids until May 16; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Bridge Construction.)

Va., Richmond.—State Highway Com. will construct reinforced concrete bridge 25 ft. long over Deep Run, 6 mi. from Elko. (See Road and Street Work.)

Va., Richmond.—Henrico County will construct reinforced concrete bridge 20 ft. long over Westham Creek, 1 mi. from Westham; bids at office State Highway Com., G. P. Coleman, State Highway Commr., until May 25. (See Road and Street Work; see Machinery Wanted—Road and Bridge Construction.)

W. Va., Martinsburg.—City voted \$10,000 bonds to construct and maintain bridge over tracks and yards of Baltimore & Ohio R. R. and Tuscarora Creek at Martin St. P. W. Leiter, Mayor. (Lately noted.)

### CANNING AND PACKING PLANTS

Ala., Hartford.—Company organized with \$2000 capital to establish cannery; E. H. Boyd, Prest.; J. M. Riley, Secy.

Ala., Talladega.—Southern Canning & Pickle Co. organized; B. B. Simms, Prest.; H. H. Thornton, V.-P.; T. Barnes, Treas.; R. H. Woodward, Secy.; W. O. Wooten, Mgr.; erect 50x100-ft. ordinary-construction building; daily capacity 5000 cans.

Fla., Frostproof.—Frostproof Citrus Packing Co. will rebuild packing plant; C. H. Walker, Bartow, Fla., Prest.; J. G. Maxcy, V.-P.; F. H. Boatwright, Sec.-Mgr. (Lately noted burned; loss \$12,000 to \$14,000.)

Ga., Hartwell.—I. J. Phillips and others are interested in establishment of cannery. Ga., Milledgeville.—Warren Edwards is interested in cannery proposition. (See Machinery Wanted—Canning Machinery.)

Ky., Science Hill.—E. L. Martin & Co. of Lexington, Ky., and Sam Webb of Vanceburg, Ky., contemplate building cannery.

La., New Iberia.—J. M. Segura organized company to establish factory for canning and preserving figs.

Md., Baltimore.—Seaboard Packing Co., Howard R. Smith, Prest., Pennsylvania and Fulton Aves., has named bidders on building construction as follows: B. F. Bennett Building Co., 123 S. Howard St.; Singer-Pentz Co., 600 Equitable Bldg.; Consolidated Engineering Co., Calvert Bldg.; Price Concrete Construction Co., Maryland Trust Bldg.; West Construction Co., American Bldg.; John Waters Co., 23 E. Center St.; all of Baltimore; Irwin & Leighton, Keyser Bldg., Baltimore, and Philadelphia; Cramp & Co.; Warren Moore & Co.; both of Philadelphia. (Previously noted organized with \$800,000 capital to buy Jones & Lamb Co. and build \$200,000 meat-packing plant; C. B. Comstock, Archt., New York.)

N. C., Henderson.—Henderson Chamber of Commerce, C. W. Roberts, Mgr., is interested in plan for cannery and can factory. (See Machinery Wanted—Canning Equipment; Metalworking Machinery.)

N. C., Navassa.—Cape Fear Packing Co., Wilmington, N. C., capital \$200,000, organized with Herbert Smith, Prest.; M. J. Corbett, V.-P.; Walter H. Griffith, Secy.-Treas.; establish plant with daily capacity 300 hogs

and 10 cattle; erect 60x180-ft. 4-story-and-basement building of reinforced concrete; plans, by Wilson & Sompayrac, 1404 Palmetto Bldg., Columbia, S. C., completed within 30 days when will ask bids. (Lately noted inceptd., etc., with Wilson & Sompayrac to prepare plans for meat-packing plant on 600-acre site; W. E. Washington, Packing-house Engr., Chicago, associated in advisory capacity.)

S. C., Spartanburg.—Spartanburg Canning & Preserving Co., capital \$3100, inceptd. by B. G. Landrum, J. W. Alexander and H. B. Carlisle.

Tenn., Kingsport.—Kingsport Packing Corporation, capital \$100,000, chartered; John N. Johnson, Prest., Gate City, Va.; J. C. Stone, Secy., Kingsport.

Tex., Greenville.—Chamber of Commerce has arranged for establishment of cannery to cost \$2000 to \$2500.

### CLAYWORKING PLANTS

D. C., Washington.—Brick—Abingdon Co., capital \$300,000, inceptd.; W. V. Cox, Prest., 24 Second National Bank Bldg.; Enoch L. White, Secy.-Treas.; both of Washington, D. C.

W. Va., Barboursville.—Brick and Tile—Huntington Clay Products Co., Box 1527, Huntington, W. Va., organized; Wm. R. Thompson, Prest.; C. P. Donovan, V.-P.; Frank D. Batts, Secy.-Treas.; Robt. T. Kyle, Mgr. and Constr. Engr., mill construction building; install machinery and power for plant with daily capacity 100,000 building brick and 20,000 hollow tile.

### COAL MINES AND COKE OVENS

Ala., Birmingham.—Carbon Hill Mining Co., capital \$2000, inceptd. by J. W. Lewis, J. E. Ross and others.

Ala., Birmingham.—Purity Black Creek Coal Co., capital \$3000, inceptd.; H. A. Lint, Prest.; W. C. Rust, V.-P.

Ala., New Castle.—New Castle Coal Co., Birmingham, Ala., organized; C. McCormack, Prest.-Mgr.; A. C. Ramsay, V.-P.; H. McDermott, Secy.-Treas.; daily output 1600 tons; 374 coke ovens; beehive; oven capacity 654 tons daily. (Lately noted incorporated.)

Ala., Bay View.—Tennessee Coal, Iron & Railroad Co., Birmingham, Ala., let contract to Roberts & Schaefer Co., McCormick Bldg., Chicago, for Marcus patent picking table screen equipment for installation in new steel tippie.

Ark., Hartford.—Martin-Rains Coal Co., capital \$2500, inceptd. by J. D. Martin, W. H. Rains and E. B. Wilbourn.

Ga., Rome.—Redmond Coal Co., inceptd. by J. O. Redmond and M. I. Redmond.

Ky., Barbourville.—Hutcheson & Martin of Middlesboro, Ky., purchased 600 acres coal land and will develop.

Ky., Hazard.—Midland Mining Co. organized; H. E. Bullock, Prest.; W. E. Davis, V.-P. and Mgr.; C. A. Tribbey, Cincinnati, Ohio, Secy.-Treas.; develop 2000 acres; daily capacity 1000 tons; has mainly purchased machinery; commence operation when Louisville & Nashville R. R. begins building proposed branch.

Ky., Sergeant.—Whitley-Elkhorn Coal Co., capital \$25,000, organized; B. F. Rose, Prest.; J. M. Freeman, Mgr., both of Williamsburg, Ky.; will develop George Brown coal tract, daily capacity 700 tons; electrical equipment.

Ky., Stone.—Sudduth Coal Co., capital \$50,000, inceptd. by M. G. Bailey and E. L. Bailey of Bluefield, E. H. Sudduth of Welch, W. Va., and others.

Ky., Toler.—Bailey Coal Co., capital \$50,000, inceptd. by M. G. and E. L. Bailey of Bluefield, E. H. Sudduth of Welch, W. Va., and others.

Ky., Typo.—Hazard Junior Coal Co., Hazard, Ky., organized; J. B. Hoge, Prest.; W. M. Pursfull, Secy.-Treas. and Constr. Engr.; P. F. Gorman, Mgr.; develop 500 acres; daily capacity 400 tons; purchased machinery. (Lately noted inceptd., capital \$15,000.)

Ky., Whitesburg.—Whitesburg Coal Co. organized; W. H. Hoover, Prest.; J. Henry Hall, Secy., Treas. and Mgr.; develop 700 acres; daily capacity 500 to 800 tons. Lately noted inceptd., capital \$60,000. (See Machinery Wanted—Building Materials.)

Md., Cumberland.—Standard Coal Co., Third National Bank Bldg., inceptd. with \$100,000 capital; Carl C. Hetzel, Prest.; C. J. Simpson, V.-P.; Geo. H. Hetzel, Secy.-Treas.; Chas. Schothern, Mgr.; develop 700 acres.

Mo., St. Louis.—Mid-State Coal & Mining Co., 1407 Market St., organized; Geo. L. Brown, Prest.-Treas.; E. H. Taylor, V.-P.; R. J. Raymond, Secy.; develop 1000 acres; daily capacity 1 car; open mining machinery bids within 30 days. (See Machinery Wanted—Mining Machinery.)

Okla., Dewar.—Citizens Coal & Mining Co. organized; W. C. Evans, Prest.-Mgr.; H. L. Courson, V.-P.; H. E. Courson, Secy.-Treas.; develop 160 acres; shaft mining; contemplated daily capacity 500 tons. Lately noted inceptd., capital \$25,000. (See Machinery Wanted—Mining Machinery (Coal).)

Tenn., Huntsville.—Paint Rock Consolidated Coal Co., capital \$3500, inceptd. by A. C. Terry, Alfred West, R. S. Barnes and others.

Tenn., Huntsville.—Terry West Coal Co., capital \$3000, inceptd. by A. C. Terry, Alfred West, W. Claude Terry and others.

Tenn., Knoxville.—Cambria Coal Mining Co., capital \$25,000, inceptd. by L. D. Tyson, C. W. Henderson, H. S. Pleass and others.

Tenn., Knoxville.—Cambria Coal Mining Co., capital \$75,000, inceptd. by L. D. Tyson, C. W. Henderson, H. S. Pleass and others.

Tenn., Monterey.—Tip Top Coal, Land & Timber Co., capital \$50,000, inceptd. by P. D. Houston, W. W. McNeilly, W. P. Cooper and others; develop 6000 acres coal land.

Tex., Amarillo.—Southwestern Coal Co. increased capital from \$40,000 to \$60,000.

Va., Bristol.—Dungannon Coal Corp., capital \$50,000, chartered; M. T. McArthur, Prest.; R. H. Spears, Secy.-Treas.; both of Johnson City, Tenn.

Va., Tacoma.—Bear Creek Coal Corp. inceptd., capital \$25,000; G. D. Kilgore, Prest., Treas. and Mgr.; W. T. Hopkins, V.-P.; C. J. Swank, Secy.; develop 300 acres; new operation; open mining machinery bids May 20; machinery includes electric hoist and pump, wire rope. (See Machinery Wanted—Mining (Coal) Machinery and Equipment.)

W. Va., Beckley.—Beckley Vein Coal Co. organized; W. W. Hume, Prest.; C. M. Ward, V.-P.; A. C. Sutphin, Secy.-Treas.; develop 500 acres; daily capacity 150 to 500 tons; machinery proposals to be addressed to Mr. Hume or Mr. Sutphin; H. F. Willfong, Constr. Engr. (Lately noted inceptd., capital \$75,000.)

W. Va., Charleston.—Dickinson Fuel Co., capital \$25,000, inceptd. by J. L. Dickinson, N. J. Wood, J. C. Malone and others.

W. Va., Clarksburg.—Wadsworth Coal Co., capital \$5000, inceptd. by Howard J. James, Chas. G. Coffman, Alma H. Coffman and others.

W. Va., Eccles.—Summit Coal Co., capital \$100,000, inceptd. by E. L. Ellison, John L. Hawley, J. Hutchinson, John Anderson and others.

W. Va., Fairmont.—Pecks Run Coal Co., capital \$25,000, inceptd. by J. W. Devision and M. P. Foye of Grant Town, W. Va., F. E. Williams of Hall, W. Va., and others.

W. Va., Hartland.—Midlothian Jewell Coal Co. (care Simms & Staker, Robson-Prichard Bldg., Huntington, W. Va.) inceptd. with \$50,000 capital; leased 500 acres coal land; C. L. Van Zandt, Prest.; Jas. Clark, V.-P. and Gen. Mgr.; A. L. Gregory, Secy., all of Huntington.

W. Va., Hartland.—Midlothian Jewell Coal Co., capital \$50,000, inceptd. by Jas. Clark, C. L. Van Zandt, A. L. Gregory and others, all of Huntington, W. Va.

W. Va., Kirk.—Kirkland Coal Co., capital \$10,000, inceptd. by B. G. Clay of Kirk, Harry Scherr and H. M. Van Denburgh of Williamson, W. Va., and others.

W. Va., Lewisburg.—Pinney-Pocahontas Coal Co., capital \$100,000, will be inceptd. by Jas. W. Dwyer and others.

W. Va., Morgantown.—Eleanor Coal Co., capital \$5000, inceptd.; Boaz B. Cox, Prest.; Robt. H. Pollock, V.-P. and Gen. Mgr.; Lee T. Lancaster, Secy.-Treas.; this year open 23 and 46 acres (2 tracts); daily capacity, first year, 100 tons; mule haulage

W. Va., Mannington.—Flat Run Gas Coal Co., capital \$600,000, inceptd. by C. L. Shaver

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



and W. H. Conway of Fairmont, W. Va., D. S. Myers of Pontiac, Ill., and others.

W. Va., Morgantown.—Davis Fuel Co., capital \$25,000, incptd. by Stanley H. Fields, Arthur Q. Davis, Frank B. Bess and others.

W. Va., Morgantown.—Hess Coal & Coke Co., Box 834, S. H. Fiedler and A. I. Davis interested, organized to develop 61 acres; daily capacity 500 tons; electric power already supplied; incline 500 ft., 45 per cent. grade; install cars and rails, etc. (See Machinery Wanted—Rails; Cars (Mine).)

W. Va., Morgantown.—Hess Coal & Coke Co., Box 834, incptd. with \$50,000 capital by Benj. M. Chapin of Morgantown, Jas. F. Baird of Brownstown, Pa., Frank B. Hess, Stanley H. Fiedler, Arthur Q. Davis and others of Uniontown, Pa.; develop 61 acres coal land; daily capacity 500 tons; electric power supplied; incline 500 ft., 45 per cent. grade; install cars and rails, etc. (See Machinery Wanted—Rails; Cars.)

### COTTON COMPRESSES AND GINS

Ark., Earle.—Earle Compress Co., capital \$50,000, incptd.; F. W. Reisinger, Pres.; N. A. Kramer, V.-P. and Gen. Mgr.; H. A. Morrison, Secy.-Treas.

Miss., Mattson.—Fairview Gin Co., capital \$10,000, incptd. by J. J. Myers, J. W. Savage and others.

Tex., Paris.—Transcontinental Compress Co., Ed. Hutson, Pres., contemplate improvements.

### COTTONSEED-OIL MILLS

Ky., Louisville.—Buttercup Oil & Car Co. increased capital from \$250,000 to \$600,000.

Okla., Ada.—Farmers' Cotton Oil Co. organized with W. J. Coffman, Pres.; A. K. Thornton, V.-P.; N. B. Haney, Secy.-Treas.; C. E. Wingo, Gen. Mgr.; build cottonseed-oil mill; contracted for machinery; in addition to handling cottonseed products, will crush peanuts. (Latest noted incptd. with \$100,000 capital.)

### DRAINAGE SYSTEMS

Ark., Jonesboro.—Commissioners Craighead County Drainage Dist. No. 14 let contract C. W. Becker of Malden, Mo., at \$19,900 to construct 10 mi. of drainage ditches to consist of cleaning and enlarging 1 main ditch, 54,000 cu. yds. and constructing 2 laterals, 146,000 cu. yds.; Cobb & Lee, Engrs., Jonesboro. (Latest noted inviting bids.)

Ark., Lonoke.—Baymuto Drainage Canal Dist. organized to drain 85,000 acres in Lonoke County; canal 60-ft. bottom to 130-ft. outlet, average width 13 ft.; cost \$375,000; date for letting contract not set; Comms. include T. W. Fletcher, Pres.; Tom C. Trimble, Secy., and Fletcher Cox.

Ark., Lonoke.—Comms. Bayou Meto Drainage Dist. No. 1, Lonoke County, T. M. Fletcher, Chrmn., ask bids until June 14 for excavation and clearing system of mains and laterals; 3,046,550 cu. yds. dredge ditch, 51,700 cu. yds. team ditch and 850 yds. clearing. (See Machinery Wanted—Drainage.)

Fla., Bradentown.—Cedar Hammock Drainage Dist. contract for construction of main canal and lateral No. 2 was let by Manatee County Comms. to Florida Drainage & Construction Co., Pinellas Park, Fla.

Fla., Largo.—Cross-Bayou Lake Largo Drainage Dist. let contract to Florida Drainage & Construction Co., Pinellas Park, Fla., to construct canal; cost \$11,000; Engr., Isham-Randolph Co., Jacksonville.

La., Plaquemine.—Lake Long Drainage Dist. organized to drain 5,000 acres between Plaquemine, town of Bayou Goula, Mississippi River and Grand River; will vote on bonds; Edward Gay, John Wilbert and Jos. Templet appointed Board of Managers.

La., Shrewsbury.—Comms. Jefferson Parish Fourth Drainage Dist., M. D. Kostmayer, V.-P., Metairie Ridge, La., will issue \$300,000 bonds for drainage improvements in Sub-drainage Dist. No. 5 of Fourth Drainage Dist.

### ELECTRIC PLANTS

Ala., Carrville.—P. O. at East Tallahassee.—Town will vote on bonds to install transformer and construct pole line from Montgomery Light & Power Co.'s plant to Carrville; 3 miles. Address Town Clerk.

Ga., Thomasville.—City voted \$160,000 bonds to improve electric-light plant, etc. Address The Mayor. (See Road and Street Work.)

Ky., Adairville.—Adairville Lighting Co. (latest noted incptd. with \$12,000 capital), R. E. Brian, Pres., will construct hydro-electric plant and install lighting system; cost \$15,000. (See Hydro-Electric Plants;

see Machinery Wanted—Electrical Equipment.)

Ky., Campbellville.—Campbellville Electric Light & Power Co. will develop 125 H. P. plant; construct dam. Latest noted incptd., capital \$40,000. (See Hydro-Electric Plants.)

Ky., Whitesburg.—W. C. Daniels of Mason, Tenn., has franchise to build electric-light plant.

Md., Baltimore.—J. H. and L. A. Dockman, 32 E. Montgomery St., will erect power plant at ice factory, to be built at Rock Creek; plans being prepared.

Miss Fernwood.—McComb-Magnolia Light & Railway Co. will erect power plant.

Mo., Kirksville.—City, G. A. Goben, Mayor, defeated bonds for electric-light plant and water-works. (Latest noted to vote \$118,000 bonds.)

Mo., Springfield.—City will vote June 16 on \$500,000 bonds for electric-light plant. Address The Mayor. (Latest noted.)

Mo., St. Joseph.—City votes in June on \$165,000 bonds to build electric-light plant. Chas. L. Faust, City Counselor.

Mo., Valley Park.—City, W. J. Vance, Mayor, will not install electric-light system. (Recent report incorrect.)

N. C., Greensboro.—Greensboro Supply Co. is reported to install 400 to 500-K. W., 3-phase, 60-cycle, 2300-volt revolving-field alternator direct connected to uniflow or tandem-compound Corliss engine; also install exciter, switchboard, etc.

N. C., Raleigh.—Palmetto Power & Light Co., capital \$200,000, incptd. by Chas. E. Johnson, H. H. Carr and others; subsidiary of Carolina Power & Light Co.

Okla., Billings.—City voted \$10,000 bonds for electric-light plant improvements. Address The Mayor.

Okla., Oklahoma City.—State Capitol Com., A. N. Leecraft, Secy., Mercantile Bldg., will erect power-house, install heating plant and construct tunnel for Oklahoma State Capitol Bldg.; bids until May 19; Layton & Smith, Archts., Oklahoma City. (See Machinery Wanted—Tunnel Construction, etc.)

Tenn., Arlington.—City will construct electric plant and water-works; oil engines; issued \$15,000 bonds. Address The Mayor.

Tenn., Chattanooga.—Lucey Mfg. Corp. will erect power-house costing \$6500. (See Foundry and Machine Plants.)

Tenn., Trezevant.—City votes May 20 on \$20,000 bonds to construct electric-light plant and water-works. Address The Mayor. (Latest noted.)

Tex., Odessa.—Odessa Light & Power Co., J. E. Garrett, Secy.-Treas., will develop 50 H. P.; cost of system \$4000. Latest noted incptd., capital \$4000. (See Machinery Wanted—Electric Wiring Material, etc.)

Va., Fredericksburg.—State Normal School will erect boiler-house and stack; W. C. Locker, Chrmn., Building Com., Virginia Normal School Board, receives bids at office of Chas. M. Robinson, Archts., Times-Dispatch Bldg., Richmond, until May 19 to erect boiler-house and stack and remove boilers; plans from Archts. for \$10.

### FLOUR, FEED AND MEAL MILLS

Ark., Kingston.—Kingston Milling Co., capital \$6000, incptd. by H. H. Basore, J. N. Bunch, C. D. Boydston and others.

Miss., Greenville.—Alfalfa Mill & Elevator Co., capital \$25,000, incptd. by J. M. Robertshaw, A. H. Stone, J. H. Fort and others.

Miss., Parchman.—Trustees, Mississippi State Penitentiary, Jackson, Miss., will erect 30x40-ft. \$5000 brick flour-mill building, with metal and tile roof and concrete floors; convict labor; plans by Anglo-American Mill Co., Owensboro, Ky.; contracts let for all equipment. (Latest noted.)

N. C., Mebane.—W. A. Murray may install mill with daily capacity 50 bbls. flour. (See Machinery Wanted—Flour Mill.)

Okla., Durant.—Durant Milling Co., capital \$100,000, incptd. by J. Lloyd Ford and J. H. Wahl of Shawnee, Okla., and T. F. Gwaltney of Madill, Okla.

S. C., Greenville.—Moore Milling Co., Washington St. (Box 974), capital \$10,000, incptd. by W. H. Moore and E. K. Lewis, purchased machinery to manufacture self-raising flour.

Tex., Vernon.—Sewell Grain & Fuel Co. will erect flour mill costing \$10,000.

### FOUNDRY AND MACHINE PLANTS

Fla., Orlando.—Machine Shop.—South Florida Foundry & Machine Works, C. E. Johnson, Pres. and W. P. Johnson, Mgr., will make repairs; probably purchase rip and

circular saw and small surfacing planer. (Latest noted to rebuild pattern and tool-room.)

Mo., St. Louis.—Scales.—General Automatic Scale Co., capital \$100,000, incptd. by Henry C. Schaper, Richard Scheid and Wm. J. O'Day.

N. C., Kinston.—Agricultural Machinery.—A. J. Chesson Agricultural Co., capital \$150,000, incptd. by A. J. Chesson, Jessie V. Chesson, A. D. Parrott, Jr., and others.

Tenn., Chattanooga.—Blacksmith Shop, etc. Lucey Mfg. Corp. will erect steel blacksmith shop costing \$8500 and power-house costing \$6500; let contracts to erect buildings to Converse Bridge Co., Chattanooga; ordered additional machinery.

### GAS AND OIL ENTERPRISES

Ala., Mobile.—W. P. Lewis Oil & Gas Co. organized to develop 100 acres gas and oil land; W. P. Lewis, Pres., Cortelyou, Ala.; W. D. Stapleton, V.-P.; Horace Davenport, Secy.-Treas.; both of Mobile.

Md., Elkton.—Warner-Caldwell Oil Co., capital \$1,000,000, incptd. by Clement M. Egner and others.

Mo., Salisbury.—Alpha Oil & Gas Co., capital \$10,000, incptd. by E. O. Snyder, W. J. King and E. C. Ferguson.

Okla., Ardmore.—Gray Oil Co., capital \$50,000, incptd. by Howard Figg of Ardmore, C. L. Gray and Vernon Ross of Kansas City.

Okla., Blackwell.—Equity Oil & Gas Co., capital \$100,000, incptd. by M. E. Buellesfeld, H. M. Dawler and F. J. Buellesfeld.

Okla., Oklahoma City.—Keys Oil & Gas Co., capital \$15,000, incptd. by J. E. Keys, M. C. Rashbach and J. H. Montgomery.

Okla., Okmulgee.—Gas Plant.—Okmulgee Producers & Manufacturers' Gas Co., capital \$500,000, incptd. by W. B. Pine, J. H. Rebold and C. H. Baker.

Okla., Ponca City.—Cross Oil Co., capital \$50,000, incptd. by C. B. Baker, B. C. Wleck and Frank Jamieson.

Okla., Sapulpa.—Patriots Oil & Gas Co., capital \$500,000, incptd. by G. C. Hughes, B. E. Drake and J. A. Spalding.

Okla., Tulsa.—Cahaba Oil & Gas Co., capital \$50,000, incptd. by C. T. Brewer, Oklahoma City, and others.

Okla., Tulsa.—Bloch Oil Co., capital \$250,000, incptd. by B. M. Bloch and F. E. Duncan of Tulsa and J. H. Bloch of Cleveland, Okla.

Okla., Tulsa.—Castor Oil & Gas Co., capital \$100,000, incptd. by Scott Wright, R. H. Klatter and S. Peterson.

Okla., Tulsa.—Oak Oil & Gas Co., capital \$15,000, incptd. by C. E. Stewart and others.

Okla., Tulsa.—Newton Oil Co., capital \$100,000, incptd. by Roy R. Poe, Ivan L. Jackson and Ben H. Levy.

Okla., Tulsa.—Beech Nut Oil & Gas Co., capital \$10,000, incptd. by C. H. Sweet, F. B. Dillard and Frank Dillard.

Okla., Tulsa.—Crab Orchard Oil Co., capital \$100,000, incptd. by Jas. K. Crawford, L. S. Kempfer, S. G. Kennedy and W. A. Springer.

Okla., Yale.—Yale Oil Corp., capital \$50,000, chartered by Clarence Davis of Sapulpa, L. B. Hancock and E. R. Hancock of Minneapolis, Minn.

Tenn., Nashville.—Producers Oil Co., capital \$40,000, incptd. by G. M. Whitson, L. A. Alsoback, C. W. De Sambrough and others.

Tenn., Nashville.—Producers' Oil & Gas Co., capital \$40,000, incptd. by G. M. Whitson, L. D. Alabrook, C. W. De Sambrough and others.

Tex., Dallas.—Oil Refinery.—Dallas Oil & Refining Co., increased capital from \$180,000 to \$500,000.

Tex., Henrietta.—Secret City Oil Co., capital \$12,000, incptd. by Dan Henry, Harvey Thompson, G. P. Graner and others.

Tex., Houston.—Northern Oil & Gas Co., incptd. by R. A. Parker, H. G. Tuffy and W. W. Kirkpatrick.

Tex., Houston.—Melva Oil Co., capital \$50,000, incptd. by W. E. Hanberry, T. J. Ewing, S. F. Dixon and others.

Tex., Mineral Wells.—Oil Pipe Line.—Consumers Gas & Fuel Co., Ned Palmer and T. W. Owen, Engrs. in charge, will construct 20-mi. pipe line; 2 to 8-in. pipe; buildings all constructed; company does own drilling. Latest noted incptd., capital \$300,000. (See Machinery Wanted—Pipe.)

Tex., Wichita Falls.—Italpay Oil Co., capital \$50,000, incptd. by W. F. Weeks, E. E. Sanders, J. Davis and others.

### HYDRO-ELECTRIC PLANTS

Ky., Adairville.—Adairville Lighting Co. incptd.; R. E. Brian, Pres.; construct plant on south fork of Red River; cost \$15,000; build concrete dam, 10x76 ft., cost \$2500, and \$3300 power-house; plans for hydro-electric plant not completed and this contract to be let Oct. 15; 3-mi. transmission line to cost \$4500; cost of urban system \$2350; connect Adairville, several small villages and large plantations; develop 135 H. P.; has let contract for crude-oil set and urban distribution system. (See Machinery Wanted—Electrical Equipment.)

Ky., Campbellville.—Campbellville Electric Light & Power Co., W. G. Heaser, Pres.-Mgr., will install plant, cost \$40,000; dam 100 ft. long, 25 ft. wide; transmission system cost \$7500; develop 125 H. P.; Howard M. Heaser, Engr. (Latest noted incptd., capital \$40,000.)

Va., Shenandoah.—City, W. F. Kountz, Chrmn. Water and Light Com., voted \$30,000 bonds for hydro-electric power plant and filtration. (In April noted, with plans and specifications by E. V. Dunston, Engr., Washington, D. C., for concrete dam and plant, 250 H. P., and new equipment; present plant to be retained as auxiliary.)

### ICE AND COLD-STORAGE PLANTS

Fla., Palmetto.—Southern Ice Co. will enlarge plant; install distilling apparatus and increase capacity of storeroom.

Fla., Pensacola.—Levy & Hallmark will establish cold-storage plant; cost \$7000.

Md., Baltimore.—J. H. and L. A. Dockman, 32 Montgomery St., are having plans prepared for ice factory and power plant at Rock Creek.

Miss., Meridian.—City votes May 31 on bonds to build ice and cold-storage plant; estimated cost, \$75,000. John M. Dabney, Mayor. (Latest noted.)

S. C., Fairfax.—Ice, Light & Gin Co. organized; J. F. Lightsey, Pres.; F. M. Young, V.-P.; E. L. Young, Secy.-Treas.; acquires Oil Mill & Mfg. Co.'s plant; equipped; ice capacity 8 tons daily.

Va., Roanoke.—General Ice Delivery Co., capital \$3000, incptd.; R. B. Griggs, Pres.; L. A. Scholz, Secy.

### IRON AND STEEL PLANTS

Ky., Grand Rivers.—Iron Furnaces.—J. M. Overton, Pres., Alabama Fuel & Iron Co., Nashville, Tenn., purchased Grand Rivers iron furnaces; repair both stacks and provide for daily output 140 to 150 tons; has begun construction. (Mr. Overton and associates lately noted buying Grand Rivers furnace property, etc.)

Va., Newport News.—Steel Furnace and Tube Mill.—Empire Steel Co. planned for organization by Chas. H. Twist of New York, Joel F. Armistead of Atlanta, Ga., Ernest B. Moore of Petersburg, Va., John S. Long of Tampa, Fla., and others; contemplates \$4,000,000 capitalization, and plant with annual capacity 60,000 tons finished product; contemplates \$940,000 investment for initial expenditures providing \$400,000 steel furnace, \$300,000 billet-mill, \$70,000 land improvements with fencing, \$60,000 power-house and equipment, \$25,000 pier, \$20,000 laboratory and office, \$15,000 railway sidings, \$50,000 incidentals, etc.; negotiating with Newport News Chamber of Commerce, J. N. Shannahan, Pres., to complete arrangements for plant.

### LAND DEVELOPMENTS

Fla., Palmetto.—Les Jardins de Floride organized with \$250,000 capital to develop 5100 acres Hillsborough County land for French-Canadian colonization; B. L. Hamner, Pres.; Geo. McKean, V.-P.; J. A. Moore, Secy.; W. E. Hamner, Treas.; plans dividing land into farms and building dwellings, schools, churches and stores.

Ga., Americus.—H. D. Terrell Land Co., H. D. Terrell, Pres., and C. D. Terrell, Gen. Mgr., will develop 3,700 acres in Sumter County, 20 mi. east of Americus, and 10 mi. from Cordele, Crisp County; general farming, pecan cultivation and colonization; plans installation of limestone plant. In April was noted incptd., capital \$300,000. (See Mining.)

Md., Baltimore.—Emton Land Co. organized; Gordon P. Paine, Pres., 306 Keyser Bldg.; E. M. Newton, V.-P.; Samuel B. Weaver, Treas., 303 Keyser Bldg. (Emton Land Co. lately noted incptd. with \$1,050,000 capital and plans for buying land optioned by Mr. Newton; develop property as site for shipbuilding plant and industrial city; 1800 acres; understood Baltimore & Ohio

R. R. will construct railway with bridge over Curtis Creek and through Anne Arundel County to shipbuilding plant site, and there build terminals; steel and shipbuilding company, when incorporated, to absorb land company.)

Md., Cumberland.—Maryland Orchards Corp., authorized capital \$2,200,000, inceptd. by J. C. Gorman (Gen. Mgr. Atlantic Transportation Co.), 291-297 Chamber of Commerce Bldg., Baltimore; C. J. Beck of New York, John B. Britain of Pittsburgh and others; acquires and will continue F. Mertens' Sons Green Ridge Orchards in Allegany County.

Mo., St. Louis.—Gauldin Farms Co., capital \$15,000, inceptd. by Thos. H. Cobbs, C. Worley, J. M. Patterson and others.

N. C., Swanquarter.—Hyde County Lumber & Land Co., Harry Warden, Berryville, Va., Pres., will develop timber land; C. F. Wall, Charles Town, W. Va., member of company, advises Manufacturers Record: We have 12,000 acres of land, with 9000 acres in timber, which will be developed into farms; contracted with Moore Calamese, Swan Quarter, to saw 3000 acres of cypress, short leaf pine and gum, mill to be installed within 60 days.

Okla., Oklahoma City.—City voted \$300,000 bonds for park. Address The Mayor.

S. C., Rock Hill.—Winthrop Normal & Industrial College will develop campus; plans by E. S. Draper, Trust Bldg., Charlotte, N. C.

Tex., San Angelo.—Halbert Pecan & Seed Co. organized; H. A. Halbert, Pres.-Mgr.; L. N. Halbert, Secy.; R. F. Halbert, Treas.; develop 1664 acres on streams of Coleman, Tom Green and Coke counties; top-work native trees and plant pecan groves. (Lately noted inceptd., capital \$65,000, by H. A. Halbert and others.)

Va., Roanoke.—Claymoor Court, capital \$25,000, inceptd.; W. B. Clay, Pres.; L. E. St. Clair, Secy.

Va., Winchester.—Forest Glen Orchard Co., capital stock \$30,000, will develop 300 acres, 6 mi. from Winchester; peach, apple and cherry orchard; also install stove mill; H. P. Hetzer, Pres., Williamsport, Md.; H. W. McVicar, V.-P.; Warren Rice, Secy.-Treas. (Lately noted inceptd.)

W. Va., Charleston.—Armor Land Co., capital \$25,000, inceptd. by Peter Silman, J. W. High, E. J. Thomas and others.

W. Va., Fairmont.—Cleveland Improvement Co., capital \$25,000, inceptd. by Albert J. Kern, W. Kenneth Barnes, C. R. Musgrove and others.

### LUMBER MANUFACTURING

Ala., Lomax.—Vida Lumber Co., Vida, Ala., will install mill with daily capacity 75,000 ft. rift sawn flooring; long leaf yellow pine. J. J. Elliott, Birmingham, Ala., Pres.; E. C. Splawn, Secy.-Treas.; W. P. Splawn, Mgr.; G. F. Houseman, Clanton, Ala., mill builder. (Lately noted. See Machinery Wanted—Sawmill Feed, etc.)

Ark., Index.—W. H. Wyseman of St. Louis, Mo., and John J. Thomas of Fulton, Ark., will build hardwood saw and stove mill; daily capacity 35,000 staves and 15,000 ft. hardwood.

Ark., Kingston.—Kingston Milling Co., capital \$600, inceptd. by H. H. Basore, J. N. Bunch, C. D. Boydston and others.

Ky., Lexington.—Perry Lumber Co., capital \$40,000, inceptd. by W. F. Perry, J. T. Perry and K. N. Dellaven.

Ky., Louisville.—Parkland Lumber Co., capital \$30,000, inceptd.; Winfield L. Waters, Pres.; Wm. F. Tafel, V.-P.; Fred. J. Klotter, Secy.-Treas.

Miss., Booneville.—Miller Lumber Co., capital \$25,000, inceptd. by E. T. Miller, T. D. Rees, H. C. Bell and others.

Miss., Canton.—Stillwater-Crosby Lumber Co. increased capital from \$200,000 to \$350,000.

N. C., Farmville.—Farmville Lumber Co., capital \$50,000, inceptd. by T. M. Dall and John T. Thorne of Farmville, and J. J. Sanders of Springhope, N. C.

N. C., Fayetteville.—Oakland Lumber Co., capital \$50,000, inceptd. by W. R. Taylor, W. M. Johnson and E. C. Johnson.

N. C., Swanquarter.—Moore Calamese will install mill to saw 3000 acres cypress, short leaf pine and gum. (See Land Development.)

Okla., Miami.—Williams Lumber Co., T. E. Williams, Springfield, Mo., Pres., conducts retail lumber yard. In April, noted inceptd., capital \$15,000. (See Machinery Wanted—Woodworking Machinery.)

Okla., Perry.—Houston-McCune Lumber Co., capital \$15,000, inceptd. by W. C. McCune

of Perry, A. C. and J. B. Houston of Wichita, Kans.

Okla., Ponca City.—O. F. Keck will build planing mill.

Tenn., Centerville.—Holland & Ferguson of Nashville, Tenn., purchased timber on 650 acres and will establish stove mill.

Tex., Jacksonville.—Inland Lumber Co., capital \$2500, inceptd. by Geo. C. Worthington, A. G. Adams and Frank Devereux.

### METAL-WORKING PLANTS

Md., Baltimore.—Granite Enamelled-ware.—National Enameling & Stamping Co., Race and Ostend Sts., advises Manufacturers Record: Will erect 60x75-ft. 3-story building to cover half of the lot and to comprise one-fourth of improvements contemplated for the site; this building to be connected by overhead bridge with present factory and to be used for storage, with upper room for japanning. (National Enameling & Stamping Co., Wm. H. Matthal, Mgr. Baltimore Branch, 1901 Light St., noted in April as letting contract to John Waters Building Co., 23 E. Center St., Baltimore, for erection of addition; plans by Chas. M. Anderson, 324 N. Charles St., Baltimore.)

Mo., Kansas City.—Wire Fence.—Universal Fence Mfg. Co., capital \$2000, inceptd. by R. W. Stern, A. W. Witt and Allie Steen.

Mo., Kansas City.—Wire and Rope.—Black Steel & Wire Co., Harry W. Black, Pres. and Mgr., 413 Bryant Bldg., let contract Swenson Construction Co. of Kansas City to erect first unit of 12-acre factory in Blue Valley to manufacture wire and wire rope; first unit will be 100x300 ft., 1 story, brick; C. K. Birdsall, Archt., Kansas City. (Lately noted.)

W. Va., Huntington.—Chains.—Hayden-Corbett Chain Co. of Columbus, Ohio, will establish plant to manufacture anchor chains for sea-going vessels.

### MINING

Ala., Ashland.—Graphite.—Dixie Graphite Co., capital \$150,000, inceptd. by C. E. Brooks of Ashland, W. L. Shumate, Jr., F. W. McMiller, J. F. Berry Baugh and Ray J. Emmerson, each of Birmingham.

Ark., Kenner.—Lead and Zinc.—Arkansas & Oklahoma Lead & Zinc Co., capital \$30,000, inceptd. by B. W. Murphy, W. B. Hitchcock, A. L. Quisenberry and W. H. Matthews.

Ark., Texarkana.—Copper.—Longmont Copper Co., capital \$300,000, inceptd. by J. R. Dale, F. W. Offenhausser, Geo. O. Barnard, H. V. Beasley and Herbert M. Barney.

Ga., Americus.—Limestone.—H. D. Terrell Land Co., inceptd., capital \$200,000; H. D. Terrell, Pres.; C. D. Terrell, Gen. Mgr.; develop lands in Sumter County and contemplate erection of 100-ton plant for quarrying, crushing and pulverizing agricultural limestone. See Land Development. (See Machinery Wanted—Mining and Crushing (Limestone) Machinery.)

La., Lafayette.—Gypsum.—Andre Martin will develop gypsum deposits.

Oklahoma.—Zinc.—Oklahoma Woodchuck Zinc Lead Co. chartered by Clement M. Egner, Elkton, Md., and others.

Okla., Ardmore.—Sand and Gravel.—Rock Creek Sand & Gravel Co., Jas. Barron, Mgr., will develop 10 acres; daily capacity 500 tons; install screens, conveyors, engines, boiler, etc. (Lately noted chartered, \$5000 capital.)

Okla., Century.—Lead and Zinc.—Ceresco Mining Co., Chas. Malxner, Pres., Ceresco, Neb., will build concentrating plant.

Okla., Commerce.—Scott Eagle Mining Co., capital \$100,000, inceptd. by Ross R. Bayless and J. S. Pittman of Commerce, R. W. Colwell of Joplin, Mo., and others.

Okla., Douthitt.—Ramage Mining Co., capital \$240,000, inceptd. by Arba Green of Miami, Okla., Alfred Ramage of Joplin, Mo., and S. Y. Ramage of Oil City, Pa.

Okla., Miami.—Melrose Mining Co., capital \$300,000, inceptd. by Ada F. Scott, Jr. of Miami, Jas. B. Trexler and H. B. Lappe of Kansas City, Mo.

Okla., Oklahoma City.—Ageeche Mining & Developing Co., capital \$20,000, inceptd. by A. G. Rosenberry and W. M. Rash of Oklahoma City and Geo. Greenhouse of Monett, Mo.

Okla., Picher.—Eagle-Picher Lead Co., A. E. Bendelari, Mgr., will build 4 concentrating plants; 3 mills of 400 tons capacity and 1 of 300 tons; estimated cost \$250,000.

Okla., Picher.—Mahutska Mining Co., capital \$150,000, inceptd. by Arba Green of Miami, Alex. U. McCandless of Robinson, Ill., and S. Y. Ramage of Oil City, Pa.

S. C., Bath.—Kaolin.—McNamee Kaolin Co., Cumberland Bldg., Broadway and 54th St., New York, organized; Robt. Spencer Finney (Pres. of Finney Building Co., Terminal Bldg., New York), Pres.-Secy.; Harry P. Stimson, V.-P. and Treas.; succeeds R. McNamee & Co.; develop 2000 acres; annual output 15,000 to 25,000 tons. Lately noted inceptd., capital \$150,000. (See Machinery Wanted—Pulverizers; Motors.)

Va., Fredericksburg.—Talc.—Southern Talc & Mineral Co., capital \$50,000, inceptd.; Stanley Doggett, Pres.; Stanley H. Doggett, Secy.-Treas.; both of New York.

### MISCELLANEOUS CONSTRUCTION

Fla., Tampa.—Terminals.—Hendry & Knight will reconstruct and repair terminals, expending \$25,000 to \$30,000; build piers and probably warehouses along entire 2500-ft. frontage; Edwards Construction Co., Contr., Tampa.

Md., Calverton.—Dredging.—Government will dredge Calverton Harbor and Tyaskin Creek, Md.; bids at U. S. Engr. Office, Baltimore, until May 14. (See Machinery Wanted—Dredging.)

Md., Elkton.—Dredging.—W. H. French Dredging & Wrecking Co., Norfolk, Va., is lowest bidder for dredging 36,000 cu. yds. material in Elk River.

Mo., Jefferson City.—Terrace Walls.—Building Co. let contract Pope Construction Co. of Jefferson City at \$48,000 to construct terrace and walls on south side of State Capitol building; contract for remainder of work costing about \$80,000 to be let later.

Tenn., Chattanooga.—Wharf, etc.—City Com. has plans by J. D. Alsop of Chattanooga for wharf improvements at river to include warehouse addition, construction of dike, paving wharf and purchase of steam crane to load boats; estimated cost, \$50,000.

W. Va., Martinsburg.—Subway.—City voted \$25,000 bonds to construct subway under tracks of Baltimore & Ohio R. R. at Queen St.; P. W. Leiter, Mayor. (Lately noted.)

### MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Construction.—Smallman-Brice Construction Co., capital \$5000, inceptd.; continues existing company; H. A. Smallman, Pres.; H. A. Brice, V.-P.

Fla., Miami.—Contracting.—Municipal Construction Co., capital \$25,000, inceptd. by Geo. M. Schafer, J. W. Williams, S. Williams and Lena Schafer.

Ga., Thomasville.—Fire-Alarm System.—City voted \$160,000 bonds to construct fire-alarm system, etc. Address The Mayor. (See Road and Street Work.)

La., Gretna.—Dairy.—R. A. Morris & Co., capital \$10,000, inceptd.; Rufus A. Morris, Pres., 227 South Peters St.; Roy Lauer, V.-P., 2213 Burdette St.; Edmond R. Lorton, Secy.-Treas., 202 Taylor Ave., all of New Orleans.

Miss., Greenville.—Grain Elevator.—Alfalfa Mill & Elevator Co., capital \$25,000, inceptd. by J. M. Robertshaw, A. H. Stone, J. H. Fort and others.

Mo., Springfield.—Construction.—Underwood-Mercer Construction Co., capital \$3000, inceptd. by J. J. Underwood, Lee Mercer and Ray Kelly.

Mo., St. Louis.—Printing and Engraving.—F. M. Strickland Printing & Stationery Co., \$4000, inceptd. by E. E. Garfield, F. M. Strickland and A. A. Eicks.

Mo., St. Louis.—Barge Transportation.—Mississippi Valley Waterways Assn., Jas. E. Smith, Pres., plans organization of 2 corporations with \$3,500,000 capitalization to operate barge on Mississippi River north of St. Louis and another south of St. Louis.

Okla., Watonga.—Grain Elevator.—Farmers Elevator Co., capital \$5000, inceptd. by B. F. Smith, C. L. Overstreet and J. L. Fisher, Omega, Okla.

Okla., Watonga.—Grain Elevator.—Farmers' Elevator Co., capital \$5000, inceptd. by B. F. Smith, C. L. Overstreet and J. L. Fisher.

S. C., Laurens.—Incinerator.—City contemplates building garbage incinerator. Address The Mayor.

Tenn., Harriman.—Contracting.—Carr Contracting Co., organized; Horace M. Carr, Pres.; J. B. Little, V.-P.; Herbert E. Carr, Secy.-Mgr.; install general road building (macadam) machinery; present daily capacity 200 yds. crushed stone. (Lately noted inceptd., capital \$10,000.)

Tex., Groom.—Grain Elevator.—Farmers' Grain & Elevator Co. will construct 25,000-bu. grain elevator; invites bids.

Tex., Petrolia.—Grain Elevator.—Wichita Mill & Elevator Co., J. W. Reasor, Mgr.,

Wichita Falls, Tex., will rebuild mill; let contract to E. A. Cox, Wichita Falls; cost of elevator \$10,000; capacity 5000 bu.; install ordinary elevator machinery. (Lately noted burned.)

Tex., Pharr.—Vegetable Evaporation, etc.—Rio Grande Farm Products Co., Alex. H. Fairchild, Mgr., will install food products plant to evaporate vegetables; also install broom corn drying plant, capacity 30 tons broom corn daily; plans to use the broom corn plant for vegetable evaporating. (See Machinery Wanted—Evaporating (Vegetable) Plants.)

Tex., Yoakum.—Creamery.—Yoakum Creamery Co., inceptd. by C. B. Thompson and Cecil H. Petrich of Yoakum and J. H. Grover of San Antonio.

Va., Grant.—Grant Co-operative Cheese Co., S. G. Thomas, Gen. Mgr., will erect cheese factory; purchased machinery.

Va., Norfolk.—Painting and Decorating.—Banks Painting and Decorating Co., capital \$5000, inceptd.; B. Banks, Pres.; Wm. Banks, Secy.

W. Va., Martinsburg.—Incinerator.—City voted \$5000 bonds to build garbage incinerator. P. W. Leiter, Mayor. (Lately noted.)

### MISCELLANEOUS FACTORIES

Ala., Eutaw.—Peanut Products.—Eutaw Oil Mill, E. Cahn, Meridian, Miss., Pres., and J. B. Byrd, Mgr., will convert cotton-seed oil mill into peanut mill; install machinery for mixed feed and velvet bean meal; G. L. Brugh, Supt. (Lately noted under Miscellaneous Factories; Flour, Feed and Meal Mills.)

Fla., Tampa.—Paper Boxes.—Standard Printing Co., 306 Harrison St., contemplates installing plant to manufacture paper boxes. (See Machinery Wanted—Paper-box Machinery.)

Ga., Savannah.—Rosin and Turpentine.—Rosin and Turpentine Export Co., 17 Battery Pl., New York, Jacksonville, Fla., and Savannah, increased capital stock from \$300,000 to \$500,000. (Lately noted.)

Ky., Lexington.—Tobacco.—R. J. Reynolds Tobacco Co., R. J. Reynolds, Pres., Winston-Salem, N. C., let contract to A. J. Stair, Knoxville, Tenn., to construct mill-construction 118x260-ft. building; cost \$75,000; plans by Manley & Young, Lexington; machinery orders placed; loose leaf tobacco. (Lately noted to erect addition.)

Ky., Louisville.—Chemicals.—Larkin Chemical Co., capital \$6000, inceptd.; B. C. Neat, Pres.; E. E. Larkin, V.-P.; C. M. Bridges, Secy.; B. C. Neat, Jr., Treas. and Gen. Mgr.

Ky., Louisville.—Tannery.—Globe Tanning Co., has plans to erect addition and remodel tannery at Ninth and Dumesnil Sts.; cost \$15,000.

Miss., Medidian.—Bakery.—B. F. Hyde Co., capital \$5000, inceptd. by B. F. Hyde and others; will establish bakery.

Mo., St. Louis.—Pop Corn, Candy, etc.—American Pop Corn Products Co., capital \$20,000, inceptd. by Wm. L. Mason, Abe Altman, Richard T. Brownrigg and others.

N. C., Elkin.—Creamery.—Elkin Creamery Co., capital \$10,000, inceptd. by G. T. Roth, R. L. Hubbard, J. F. Hendren and others.

N. C., Reidsville.—Cigarettes.—American Tobacco Co. (111 Fifth Ave., New York) is reported to build cigarette factory.

N. C., Shawboro.—Shawboro Mfg. Co., capital \$6000, inceptd. by C. E. Kramer, J. A. Spence and others.

Tex., Dallas.—Rubber.—Peevey Rubber Co., capital \$100,000, inceptd. by Ralph A. Peevey, N. P. Deavours and E. W. Ware.

Tex., El Paso.—Cigars.—Commercial Cigar Co. inceptd. by Jos. C. Smith, Robt. E. Matthews and Roy H. Eisenberg.

Tex., Fort Worth.—Bags and Burlap.—Fort Worth Bag and Burlap Co., capital \$15,000, inceptd. by R. J. Brewton, Bert K. Smith and J. R. Wolfe.

Tex., San Antonio.—Bakery.—Barker Bakery, capital \$5500, inceptd. by Thos. Fogle and Clarence E. Campbell of San Antonio, and Carrie E. Campbell, Mosco, Idaho.

Va., Galax.—Automobile Chain Tightener.—Harp Auto Chain Tightener Co., capital \$300,000, inceptd.; W. I. Harp, Pres.; Chas. P. Waugh, Secy.-Treas.

Va., Roanoke.—Chemicals.—Good Chemical Co., capital \$50,000, inceptd.; L. M. Good, Pres.; C. W. Robinson, Secy.-Treas.

W. Va., Huntington.—Medical Device.—W. C. McKellar and Albert H. Davidson (of Zomer-Bradshaw Co.) plan to incorporate company to manufacture electro-medical device.



**MOTOR CARS, GARAGES, TIRES, ETC.**

Miss. Gulfport.—Garage.—Harrison County Sales Co., will erect 2-story garage.

Mo., St. Louis.—Automobile Device.—Multi-pull Mfg. Co., capital \$25,000, incptd. by Chas. W. Bardenheier, O. S. Miller and C. C. Nichols.

Mo., St. Louis.—Automobiles.—Bertrand Motor Car Co., capital \$20,000, incptd. by Bertrand, A. A. Lancaster and J. J. Sheahy.

Okla., Tulsa.—Assembling Plant.—Universal Motor Co. will erect assembling plant; 4 stories; site, 150x140 ft.

Okla., Tulsa.—Garage.—Pat Hurley and A. C. Johnson will erect garage; brick; stone trimmings; 1 story; 100x140 ft.; cost \$14,000; plans by A. J. Knapp.

Tenn., Nashville.—Automobiles.—Motor Service Co., capital \$5000, incptd. by F. D. Fisher, H. T. Campbell, Jr., H. A. Adams and others.

Tenn., Nashville.—Automobiles.—Chalmers Co. of Tennessee, capital \$15,000, incptd. by Paul S. Cecil, Allen F. Parkes, H. Simmons and others.

Tex., Corpus Christi.—Automobiles.—Mayfield Auto Co., capital \$10,000, incptd. by J. L. Mayfield, Clark Pease and W. R. Norton.

Tex., Edna.—Garage.—E. R. York will occupy as garage building to be erected by B. S. Stockard; structure will be brick; 50x100 ft.; awarded contract.

Tex., Graham.—Graham Electric & Auto Co., capital \$27,000, incptd. by J. E. Dowdle, W. F. Babb and B. P. Walker.

Va., Norfolk.—Automobiles.—Johnson Motor Corp., capital \$50,000, chartered; W. C. Johnson, Pres.; W. C. Letch, Secy.-Treas.

Va., Petersburg.—Automobiles.—Temple Vulcanizing Co., capital \$10,000, incptd.; E. G. Temple, Jr., Pres.; C. Braxton Bryan, Jr., Secy.-Treas.

**RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.**

Fla., Pensacola.—Gulf, Florida & Alabama Ry., J. P. Lynahan, Supt., will build machine shop and make other improvements.

Fla., Pensacola.—Gulf, Florida & Alabama Ry., J. P. Layman, Supt., will build \$15,000 shop, increase wharf facilities, etc.

Miss., Meridian.—New Orleans & Northeastern R. R., A. A. Woods, Supt., New Orleans, is reported to rebuild burned shops.

Va., Roanoke.—Virginian Ry. Co., H. Fernstrom, Ch. Engr., Norfolk, Va., advises Manufacturers Record: Do not contemplate improvements to shops and freight yard. (Lately noted.)

Va., Vickers.—Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, Va., will erect coaling station; capacity 20 cars coal; plans and specifications prepared.

**ROAD AND STREET WORK**

Ala., Dadeville.—Tallapoosa County voted \$245,000 bonds to construct roads and bridges. Address County Commrs. (Lately noted.)

Ala., Enterprise.—City will pave streets, 14,000 sq. yds.; also probably construct large amount cement sidewalks; soon invite bids; Arthur Pew, Engr., 500 Forsythe Theater Bldg., Atlanta, Ga. (See Machinery Wanted—Paving.)

Ala., Linden.—Marengo County will repair 5 mi. gravel road south from Linden and gravel 2 mi. extension of same road; County Commrs. receive bids until June 4; A. L. Hasty, Judge of Probate; D. G. Wilkinson, County Engr. (See Machinery Wanted—Road Construction.)

Ark., Des Arc.—City, John W. Booth and others, Commrs., will expend \$20,000 to construct 5½ mi. cement walks and street crossings. (Contract lately noted let to P. F. Connelly Paving Co., Little Rock.)

Ark., Forrest City.—Commrs. St. Francis County Road Improvement Dist. No. 3, J. D. Baugh, Chrmn., are having surveys and plans made for construction (probably gravel) of 40 mi. road, according to regulations of U. S. Government and State Highway Depts.; Engrs., Herring & Schellhaus, Forrest City; \$200,000 available. Lately incorrectly reported. (See Machinery Wanted—Drilling Machinery.)

Ark., Pocahontas.—Randolph County, Road Improvement Dist. No. 2, will construct road from Pocahontas to Missouri State line, 35 mi. long, costing \$125,000. J. D. Wells and others Commrs.

Ark., Russellville.—Paving Dist. No. 2 will construct 5380 sq. yds. concrete, asphalt macadam or tarvin paving; Towl Engineer-

ing Co., Engr.; Commrs. of Paving Dist. W. L. Howell, Secy., receive bids until May 30. (See Machinery Wanted—Paving.)

Ark., Texarkana.—Miller County Highway and Bridge Dist., Louis Joseph, Secy., 436 State National Bank Bldg., let contract Womack Construction Co., Sherman, Tex., at \$489,256.57 to construct about 68 mi. of road; Lund & Hill, Engrs., 527 Southern Trust Bldg., Little Rock, and Christian & Ayres, 425 State National Bank Bldg., Texarkana. (Lately noted inviting bids.)

Ark., Waldron.—Scott County Road Improvement Dist. No. 1 organized; construct 30 mi. macadam highway costing \$160,000; County Court authorized \$100,000 bond issue; J. S. Hill, Chrmn. Commrs.

Fla., Bartow.—Polk County Special Road and Bridge Dist. No. 2, A. T. Mann, Chrmn. County Commrs., voted \$150,000 bonds to build hard-surface roads.

Fla., Bartow.—Polk County Special Road and Bridge Dist. voted to organize district to construct asphalt road from Auburndale to Lake County line. Address County Commissioners.

Fla., Kissimmee.—Osceola County Commrs. ordered election for June 16 to vote on \$100,000 bonds to construct roads from Loughman to Kissimmee to Dist. Nos. 1 and 2.

Fla., Tavares.—Lake County Commrs., H. H. Duncan, Clerk, let contract W. H. Fox Construction Co., Nashville, Tenn., at \$59,000 to construct 25 mi. clay roads in Howey Special Dist.; 31,717 cu. yds. excavation, 218,800 sq. yds. sand-clay surface, etc.; E. J. Close, Engr., Leesburg, Fla. (Lately noted inviting bids.)

Fla., West Palm Beach.—Palm Beach County Commrs., L. Trevette Lockwood, Chrmn., will issue \$11,500 bonds for construction Special Road and Bridge Dist. No. 2.

Ga., Barneville.—City let contract Preston-Small Co., Macon, Ga., to pave streets, 14,000 sq. yds., with concrete and Lakeland Improvement Co., Lakeland, Fla., to pave sidewalks, 4 mi., with concrete, estimated cost, \$45,000; Solomon-Norcross Co., Engr., Atlanta; B. M. Turner, Mayor. (Lately noted inviting bids.)

Ga., Thomasville.—City voted \$160,000 bonds to pave streets and sidewalks, extend water mains, improve water and electric-light plant, construct fire-alarm system, etc. Address The Mayor. (Noted in March.)

Ky., Earlington.—City Commrs., City Hall, will receive bids until May 25 to improve State Aid road No. 54D4; 6300 cu. yds. earth excavation, 4086 cu. yds. macadam, etc.; R. E. Wipfler, Engr., Earlington; W. E. Rash, Mayor. (See Machinery Wanted—Road Construction.)

Ky., Franklin.—Simpson County Commrs. let contract Hensan Bros. at \$13,000 to construct 3½ mi. of road.

Ky., Irvine.—City, S. Rutledge, Winchester, Ky., Engr., let contract to Mills & Howell, Irvine and Frankfort, Ky., for water-bound macadam and curb and gutter construction; 4330 cu. yds. stone, 15,388 ft. curb and gutter, and sewer work; \$23,900 (including \$12,000 bonds) available. (See Machinery Wanted—Forms.)

Md., Baltimore.—City will grade, curb and pave following streets: Contract No. 154, sections of Abell and Ellerslie Aves., McPhail St. and University Parkway; 11,500 sq. yds. sheet asphalt, 5900 lin. ft. armored concrete curb, 950 sq. yds. brick gutter and 19,000 cu. yds. grading; Contract No. 156, Thirty-third St. extension, from Hillen to Harford Rds.; 9900 sq. yds. sheet asphalt, 3550 lin. ft. armored concrete curb, 500 sq. yds. brick gutters and 18,000 cu. yds. grading; Contract No. 155, Woodberry Ave., from Pimlico Circle to Green Spring Ave.; 13,000 cu. yds. grading; bids until May 23; John H. Robinette, Prest. Commrs. for Opening Streets, City Hall. (See Machinery Wanted—Paving.)

Md., Hagerstown.—Washington County Commrs. let contract M. J. Grove Lime Co., Lime Kiln, Md., to construct Mill Point-Lappans Rd.; water-bound macadam construction; cost \$33,195.25. (See Machinery Wanted—Shovel (Steam).)

Miss., Aberdeen.—Monroe County voted to construct roads. Address County Commrs.

Miss., Greenville.—Washington County will surface with concrete, warrentite or asphaltic concrete 180,000 sq. yds. of highways; bids until May 30; J. S. Allen, Chief Engr. (See Machinery Wanted—Road Construction.)

Miss., Hattiesburg.—Forrest County Supervisors will construct 46 mi. of roads to cost \$81,694.10; Mr. Myers, Engr.

Miss., Indianola.—Sunflower County Highway Commrs. let contract to Inland Con-

struction Co., Chandler, Okla., to construct roads. (Bids were noted in April for construction in Dist. 2 and 3; \$300,000 available.)

Miss., Leakeville.—Greene County Supervisors let contract M. H. Thompson of Gulfport, Miss., at \$50,278.42 to construct link of Natchez and Mobile Highway.

Miss., Port Gibson.—Clatsborne County Supervisors, L. B. Allen, Prest., will let gravel road contract in July. Lately noted to have \$40,000 available for road and bridge construction. (See Bridges, Culverts, Vlducts.)

Miss., Vaiden.—Carroll County, Beat 5, is reported to have voted bonds to construct roads. Address County Commrs.

Mo., Benton.—Scott County Commrs. ordered election for June 9 to vote on \$800,000 bonds to construct roads, bridges and culverts. (Supersedes recent item.)

Mo., Kansas City.—City let contract Nicholas Miller at \$101,561 to improve Beardsley St., including concrete and rubble masonry, conduits, railing, waterproofing, electric light, etc.

N. C., Asheville.—City Commrs. let contract Asheville Paving Co., Asheville, for 25,000 yds. asphaltic concrete on old macadam and 10,000 yds. sheet asphaltic concrete base; Engr., R. M. Lee, Box 157, Asheville; J. G. Stikeleather, Com. Public Works.

N. C., Asheville.—Buncombe County will construct road; T. M. Howerton, County Engr., wires Manufacturers Record: Receive bids until May 21 on concrete or asphalt for Hendersonville Rd.; about 100,000 sq. yds. (See Machinery Wanted—Road Construction.)

N. C., Jefferson.—Ashe County defeated \$200,000 bonds to construct roads. (Lately noted.)

N. C., Lenoir.—Caldwell County defeated \$250,000 bonds to construct roads. (Noted in January.)

N. C., Boone.—Watauga County voted \$300,000 bonds to construct roads. Address County Commrs.

N. C., Yadkinville.—Yadkin County Commissioners, E. C. Mayberry, Secy., ask bid for June 5 to construct 27 mi. sand-clay roads. (See Machinery Wanted—Road Construction.)

S. C., Laurens.—Laurens County Highway Com., H. B. Humbert, Supervisor, will construct 200 mi. road; will select engineer at meeting May 24. In April, \$300,000 bonds noted voted. (See Machinery Wanted—Engineer.)

S. C., Pickens.—Pickens County, C. L. Cureton, Chrmn. Highway Com., will construct sand-clay and top soil roads; not decided as to doing work by contract; \$250,000 available. In March, bonds noted authorized. (See Machinery Wanted—Road Machinery, etc.)

Tenn., Columbia.—City will pave W. 7th, S. Main, S. Garden and Railroad Sts. with asphaltic concrete on macadam foundation; also construct sewers on S. Garden and S. Main Sts.; E. E. Erwin, Recorder, receives bids for paving until May 25 and for sewers until May 18; J. M. Dedman, Mayor. (See Machinery Wanted—Paving and Sewer Construction.)

Tenn., Knoxville.—City let contract Murray Construction Co. of Knoxville at \$41,590 to resurface with asphalt sections of Market and Walnut Sts., Commerce, Wall, Asylum and Depot Aves.; total of 26,900 sq. yds.; J. B. McCalla, City Engr. (Lately noted inviting bids.)

Tenn., Maynardville.—Union County Commissioners ask bids until about June 21 to construct macadam roads; cost \$50,000; have completed 20 mi. macadam construction; Joe McDonald, Engr., Maynardville. Lately noted. (See Machinery Wanted—Road Construction.)

Tenn., Mountain City.—Johnson County Pike Com., H. A. Donnelly, Secy., advises Manufacturers Record: Will build about 70 mi. road, approximate cost \$3000 per mi.; construction bids not yet advertised; C. M. Dulaney, Mountain City, Engr. (Lately noted opening bids May 7 on 25 mi.)

Tenn., Springfield.—Robertson County will vote on \$150,000 bonds to improve roads. Address County Commrs. (Lately noted.)

Tenn., White Bluff.—City voted \$5000 bonds for street work. Address The Mayor.

Tenn., White Bluff.—City voted \$5000 bonds to improve streets. Address The Mayor.

Tex., Fort Worth.—City will pave Allen Ave. viaduct; 2156 sq. yds.; bitulithic, asphaltic concrete, vertical fiber brick; bids until May 22; F. J. Von Zuben, City Engr.; C. D. Wiggins, Street Commr. (See Machinery Wanted—Paving.)

Va., Richmond.—State Highway Com. will construct 1 mi. gravel road between Osborne Turnpike and Wilson's mill, Henrico County; also reinforced concrete bridge 25 ft. long over Deep Run, 6 mi. from Elko; bids until May 21; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road and Bridge Construction.)

Va., Richmond.—Henrico County will construct 1.36 mi. bituminous penetration macadam on River Road between Country Club and Goodland County line; also reinforced concrete bridge 30 ft. long over Westham Creek, 1 mi. from Westham; bids at office State Highway Com., G. P. Coleman, State Highway Commr., until May 25. (See Machinery Wanted—Road and Bridge Construction.)

Va., Tazewell.—City will pave streets with bituminous macadam or concrete; 15,000 sq. yds.; bids until May 19; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Paving.)

W. Va., Beckley.—Raleigh County Commrs. let contracts to construct 70 mi. of road, including Giles, Fayette and Kanawha turnpike, 26 mi. from Fayette County to Mercer County line; Doggett & Dowdy, principal contractors; C. L. Scott, Jr., Highway Engr. (Lately noted inviting bids.)

W. Va., Charleston.—Kanawha County, Elk Dist., S. E. Childress, Deputy Clerk, has indefinitely postponed vote on \$335,000 bonds for road construction. (Noted in March.)

W. Va., Clarksburg.—Harrison County Commrs. let contract Hornor & Allen of Clarksburg to construct 2 sections of brick roads: ½ mi. on Weston Pike, Clark Dist., width 16 ft., cost \$12,000; 1 mi. on Clarksburg-Fairmont Rd., Coal Dist., width 16 ft., cost \$30,000. G. M. Harbert, County Road Engr. (Lately noted inviting bids.)

W. Va., Fayetteville.—Fayette County, Sewell Mountain Dist., will construct road from Thurmond to Echo Mountain Rd., 1.8 mi., to include retaining walls; bids until June 11; T. F. Malloy, Dist. Road Engr., Landisburg, W. Va.; lately noted to have rejected bids. (See Machinery Wanted—Road Construction.)

W. Va., Fayetteville.—Fayette County will grade and drain James River and Kanawha Turnpike, Falls Dist., from Kanawha County line to Mountain Cove Dist. line, 14.5 mi., including construction of retaining walls; bids until June 11; T. F. Malloy, Road Engr., Landisburg, W. Va.; R. J. Stegall, Clerk County Court; lately noted; this is second call for bids. (See Machinery Wanted—Road Construction.)

W. Va., Martinsburg.—City voted \$115,000 bonds to pave streets with brick and asphalt macadam. P. W. Leiter, Mayor. (Lately noted.)

W. Va., Williamson.—Mingo County voted \$1,000,000 bond issue to construct roads. Address County Commrs.

**SEWER CONSTRUCTION**

La., New Iberia.—Commrs. First Sewer Dist., Chas. L. Provost, Secy., asks bids until June 12 (change of date) to construct sanitary sewer system and disposal plant; Xavier A. Kramer, Engr., Magnolia, Miss. Lately noted. (See Machinery Wanted—Sewer Construction.)

Mo., St. Joseph.—City votes in June on \$350,000 bonds to construct sewers. Chas. L. Faust, City Counselor.

Tenn., Columbia.—City will construct sewers on S. Garden and S. Main Sts.; E. E. Erwin, Recorder, receives bids until May 18. (See Road and Street Work; see Machinery Wanted—Paving and Sewer Construction.)

W. Va., Huntington.—City Commrs. will construct sewer costing \$6000.

W. Va., Martinsburg.—City voted \$25,000 bonds to construct storm sewers. P. W. Leiter, Mayor. (Lately noted.)

**SHIPBUILDING PLANTS**

Ala., Mobile.—Henderson Iron Works Co. advises Manufacturers Record: Will build 6000-ton floating dock for operation with our plant, which consists of shops and equipment for building or repairing iron or wooden vessels of any description; our property has frontage of 1000 ft. on east side Mobile River. (Lately noted to install \$300,000 equipment providing facilities for ship construction.)

Ala., Mobile.—Horace Turner of Turner Terminal Co. advises Manufacturers Record: Neither Eastman, Gardner & Co. nor I have agreed to build any ships; nothing definite at this time. (Eastman, Gardner & Co., Laurel, Miss., and Horace Turner lately reported planning to build shipyards.)

Ala., Mobile.—J. F. Coleman Engineering Co., Consult. Engr., 321 Ithaca Bldg., New Orleans, advises Manufacturers Record: For clients, have acquired option on waterfront property adjacent to Mobile city limits; now investigating by topographical and hydro-graphical surveys, etc., to report prior to expiration of option; unable to advise concerning details of project until report is acted upon by clients. (J. F. Coleman, Civil Engr., New Orleans and associates lately noted proposing to build shipyards, reports stating they contemplate investment of several million dollars for land, docks, buildings, machinery, etc.)

D. C., Washington.—United States Shipping Board Emergency Fleet Corp. chartered with \$50,000,000 capital; Major-Gen. Geo. W. Goethals, Gen. Mgr.; all stock owned by Government; officers and directors are all members or employees of Federal Shipping Board; Board will ask Congress for increase of capital, if needed, to \$225,000,000; let contracts to privately-owned shipyards for constructing ships on standardized plan adopted by Government; probably finance some private yards; present plans provide for 1000 wooden ships, costing \$300,000 each; ship plans by W. T. Donnelly, Naval Archt., New York.

Fla., Tampa.—Williams, Fair & Park Construction Co., R. M. Williams, Mgr., New York, plans to construct marine ways for building wooden ships for Government; later improve plant to provide for building steel vessels. (Lately noted proposing to construct shipbuilding plant.)

Fla., Tampa.—Bates-Hudnall-Jetton Co., N. W. Greene, Engr., advises Manufacturers Record: At first planned temporary yards to construct wooden ships for Federal Shipping Board; have about decided to make equipment permanent and construct both wooden and steel ships. (Lately noted to establish plant for constructing wooden vessels, initial facilities to include ways for building submarine chasers.)

La., New Orleans.—Ernest Jahneke is reported to establish shipbuilding plant.

Md., Baltimore.—Robt. J. Gill, Keyser Bldg., proposes organization of \$500,000 company to build wooden ships for Government; locate plant on either Patapsco or Potomac River.

Md., Baltimore.—McLean Contracting Co. will remove its plant (marine railway, shops, docks, etc.) to Sagax property, adjoining property on which Coastwise Ship Building Co. (lessee of McLean Wharf & Warehouse Corp.) is now operating; will use buildings already erected and install launching ways; all construction by company's own force.

Md., Elkton.—Southern Shipbuilding Corp. representative is C. C. Daniels, 20 Broad St., New York; he wires Manufacturers Record: Corporation not now ready to announce plans. (Lately noted inceptd. with \$10,000,000 capital.)

Tex., Beaumont.—Tarver Shipbuilding Corporation, M. Storhaugh, Mgr., advises Manufacturers Record: Assets of Beaumont shipyards include \$6000 to \$8000 machinery for constructing and repairing ships; will add new machinery, including band saws, drills, air compressors, etc., costing \$2000 to \$5000; if larger marine ways are constructed or drydock built, then will purchase other machinery and equipment. (Lately noted organized with \$150,000 capital, buying Beaumont Shipyards Co., etc.)

Tex., Port Arthur.—Long-Bell Lumber Co., Kansas City and Port Arthur, will establish plant for constructing wooden ships.

Va., Alexandria.—Tucker K. Sands, V.-P. Commercial National Bank, Washington, D. C., purchased Chas. A. Dean's shipyards; advises Manufacturers Record: Not now prepared to state plans.

Va., Berkeley.—Old Dominion Ry. Corp. contemplates acquiring adjoining property and providing facilities for building 3000-ton Government ships.

Va., Portsmouth.—Bureau Yards and Docks, Navy Dept., Washington, D. C., has submitted plans and specifications for erecting fireproof machine-shop building to cost \$550,000 at Norfolk Navy-yard; 600x130 ft.; steel construction with hollow-tile walls, stuccoed; steel window sashes and fireproof doors; construction will require 3250 tons structural steel, 80,000 sq. ft. ribbed glass and 3600 sq. ft. wire-ribbed glass; foundry, of same type, costing \$370,000, will call

for 2000 tons structural steel, 66,800 sq. ft. ribbed glass and 1000 sq. ft. wire-ribbed glass; bids opened May 21; specifications (Nos. 2371 and 2375) and drawings upon application to Bureau and to Commandant of navy-yard. This is portion of improvements for shipbuilding. (Supplements recent report.)

Va., Port Richmond.—York River Shipbuilding Corp. chartered with \$1,000,000 capital to construct shipbuilding plant on Mattaponi River; initial facilities for building Government ships; later provide for constructing steel vessels; probably let contract to T. S. Winston & Co., Richmond, Va., and New York, to build initial yards; Warner Moore, Pres.; Jas. Mullen, Secy.; Oliver J. Sands, Treas.; each of Richmond; Crosby Thompson, V.-P., West Point, Va.; Adolph Sheldner and E. E. Baker, Naval Archts.

### TELEPHONE SYSTEMS

Ala., Montgomery.—Southern Bell Telephone & Telegraph Co., W. C. Bruce, Dist. Mgr., will erect additional exchange building to be connected with present structure.

Ga., West Point.—Interstate Telephone Co., capital \$10,000, inceptd. by T. C. Lanier and others.

Tex., San Diego.—Garcia Telephone Co., capital \$5000, inceptd. by Sixto Garcia, Sr., Sixto E. Garcia and Camilo G. Palacios.

W. Va., Beverly.—Beverly Telephone Co., capital \$5000, inceptd. by H. H. Daniels, J. J. Doon, C. A. Wees and others.

### TEXTILE MILLS

Ala., Talladega.—Hosley.—Hicks Hosley Mill will install automatic knitting machinery costing \$35,000; increase daily capacity of plant from 300 to 1000 dozen.

Md., Baltimore.—Tire Fabrics.—Tucker Mills, J. E. Tucker, V.-P., 428 E. Saratoga St., plan to build addition to manufacture automobile tire fabrics. (Lately noted incorporated with \$100,000 capital, succeeding Monumental Mfg. Co., etc.)

N. C., Fayetteville.—Cotton Cloth.—Tolar, Hart & Holt Mills increased capital from \$200,000 to \$300,000.

N. C., Roanoke Rapids.—Cotton Damask.—Rosemary Mfg. Co. increased capital from \$1,000,000 to \$2,000,000; from accumulated surplus; does not now contemplate any mill additions.

Tenn., Erwin.—Silk.—A. P. Villa & Bros., 95 Madison Ave., New York and Passaic, N. J., will build branch silk mill; main building 310x55 ft.; shipping and engine-room 55x35 ft. (Previously reported as proposing to build branch mill.)

Va., Martinsville.—Cotton Cloth, Hosiery, etc.—Marshall Field & Co., Chicago, advise Manufacturers Record: Engineers now laying out townsite; have let contracts for machinery; soon begin building construction; plans for mills being drawn; will not have definite statement for few months. (Lately noted advising Manufacturers Record: Purchased 2000 acres land for industrial city site; plans include erection of mills to manufacture cotton cloth, hosiery and other textile products.)

W. Va., Philippi.—Blankets.—Philippi Blanket Mills organized with \$75,000 capital; Edw. C. Hall, Pres.; Phillip D. Campbell, V.-P.; C. L. Hall, Secy.-Treas.; has plant with 1200 spindles, 22 broad looms, etc.; daily capacity 200 blankets.

### WATER-WORKS

Fla., Palatka.—City is considering \$60,000 bond issue for additional water facilities. Address The Mayor.

Ga., Thomasville.—City voted \$160,000 bonds to extend water mains, improve water plant, etc. Address The Mayor. (See Road and Street Work.)

La., Bogalusa.—City, K. I. Bean, City Clerk, will install water pipe, hydrants, etc.; asks bids. (See Machinery Wanted—Water-works.)

Mo., Fredericktown.—City contemplates constructing water-works to cost \$60,000. Address The Mayor.

Mo., Kirksville.—City, G. A. Goben, Mayor, defeated bonds for water-works and electric-light plant. (Lately noted to vote on \$18,000 bonds.)

Okla., Billings.—City voted \$10,000 bonds for water-works construction. Address The Mayor.

Okla., Red Fork.—City contemplates constructing water-works. Address The Mayor.

Tenn., Arlington.—City will construct water-works and electric-light plant; oil

engines; issued \$15,000 bonds. Address The Mayor.

Tenn., Trezevant.—City votes May 20 on \$30,000 bonds to construct water-works and electric-light plant. Address The Mayor. (Lately noted.)

Va., Shenandoah.—City, W. F. Kountz, Carmin. Water and Light Com., voted \$30,000 bonds for hydro-electric power plant and filtration; plans and specifications were noted in April as by E. V. Dunstan, Washington, D. C. (See Hydro-Electric Plants.)

W. Va., Martinsburg.—City voted \$5000 bonds to improve and extend water-works. P. W. Leiter, Mayor. (Lately noted.)

### WOODWORKING PLANTS

Ala., Decatur.—Boxes and Baskets.—Decatur Box & Basket Co. increased capital from \$10,500 to \$25,000; will rebuild burned plant. (Lately noted.)

Ala., Troy.—Staves.—Foley Stave Mill plans to double capacity.

Ark., Corning.—Staves.—Myers Stave & Mfg. Co. increased capital from \$50,000 to \$100,000.

Ark., Index.—Staves.—W. H. Wyseman of St. Louis, Mo., and John J. Thomas of Fulton, Ark., will build stave and hardwood sawmill; daily capacity 35,000 staves and 15,000 ft. hardwood.

Ark., Lake Village.—Barrel Hoops.—J. M. Peel & Bro., J. W. Peel, Alexandria, La., Pres., and W. S. Peel, Secy.-Mgr., will remove plant from Arlington, Ohio, to Lake Village; erect 40x46-ft. mill-construction building; daily capacity hoops 70,000. (Lately noted.)

Ark., Truman.—Cooperage.—Truman Cooperage Co. engaged Unit Construction Co., Title Guaranty Bldg., St. Louis, to design and construct plant, including jointer buildings, heading mill, stave dryers, etc.; estimated cost \$150,000.

Ky., Louisville.—Wagons.—Kentucky Wagon Mfg. Co. will erect forge shop at 3d and K Sts.; 1 story; brick; 80x130 ft.; cost \$10,000.

Tenn., Centerville.—Staves.—Holland & Ferguson of Nashville, Tenn., will establish stave; develop timber on 650 acres.

Tex., Clarksville.—Wagon Materials.—Gibbons Mfg. Co. increased capital from \$10,000 to \$20,000.

Va., Norfolk.—Barrels.—Truckers' Mfg. Co., capital \$175,000, inceptd. by B. A. Shelton, Pres.; C. N. Burgess, Secy.-Treas.

Va., Winchester.—Staves.—Forest Glen Orchard Co., Warren Rice, Secy.-Treas., will install stave mill. (See Land Developments.)

W. Va., Buckhannon.—Boxes and Shooks.—Triangle Mfg. Co. organized with F. L. Williams, Pres.-Mgr., will continue manufacture of boxes and box shoos; etc., and general planing-mill work. (In April, noted inceptd., capital \$10,000.)

### FIRE DAMAGE

Ala., Huntsville.—Stores of W. L. Newby and Foster Ezell; loss \$11,000.

Ala., Carlisle.—Dr. J. J. Patterson's residence.

Ala., Tuscaloosa.—Building owned by Handley E. Tate and occupied by Tuscaloosa Meat & Provision Co. and F. A. Mills; estimated loss \$10,000.

Ark., Hot Springs.—Billy Layton's residence.

D. C., Washington.—Building at 506-08 Fourteenth St. N. W., owned by Government and occupied by National Engraving Co., Potomac Electrotype Co. and Specialty Paper Box Co.; estimated loss \$25,000.

Fla., Bradentown.—B. O. Barrington's residence.

Fla., Lockhart.—Overstreet Crate Co.'s plant; loss \$200,000.

Fla., Tampa.—Building owned by Mutual Realty & Investment Co. and occupied in part by Tennessee House; loss \$5000.

Ga., Alamo.—I. Ideson's residence; loss \$12,000.

Ga., Atlanta.—Southern Iron & Equipment Co.'s plant; loss \$100,000.

Ga., Bridgeboro.—Harrell-Thornton Bldg., occupied by Bridgeboro Mercantile Co., McAllister Grocery Co.'s store; Porter's Barber Shop; Thornton's Garage; loss \$15,000.

Ga., Cornelia.—I. C. Wade's residence.

Ga., Wadley.—Noah W. Bodingfield's residence; loss \$5000.

Ga., Winder.—W. H. Quarterman's dwelling; loss \$3000.

Ky., Pineville.—Jas. Johnson's residence; Ernest Withrow's residence.

La., Lake Charles.—J. Hampton Prater's residence; loss \$3000.

La., La Fayette.—Walker County Messenger building, owned by Napier Estate; depot of La Fayette-Chattanooga jitney line; Southern Express Co.'s building; loss \$7000 to \$10,000.

La., New Orleans.—Old Country Club building, owned by Robt. Werk, 2518 Ursulines St.; loss \$18,000.

La., Shreveport.—J. D. Wilkinson's 2 dwellings.

Md., Thurmont.—Mrs. John D. Domer's residence; loss \$3000 to \$4000.

Miss., Enterprise.—H. C. Dear's excelsior factory.

Miss., Kokomo.—Henry Clay's livery stable and garage; Mrs. Sarah Forbes' restaurant; C. C. Barnes' building; store owned by S. E. Drew, Sr. and W. E. Drew, Jr.

Miss., Laurel.—S. H. Bates' residence.

Miss., Picaune.—Cybur Lumber Co.'s sawmill machine shop, boiler-house and sizer.

N. C., Charlotte.—Jas. P. Stowe & Co.'s drug store, owned by Mrs. D. M. Rigler, 1501 S. Boulevard; loss \$5000.

N. C., Marshville.—Mrs. Irene Marsh's 2 buildings, occupied by Marsh-Lee Co.; Harrell Bros. & Co.'s building, owned by Mrs. J. C. Little, Raleigh, N. C.; Harrell Bros. & Co.'s building, occupied by McBride-Hallman Co.; estimated loss \$100,000.

Okla., Davidson.—First State Bank building; E. B. Wiley's store; loss \$8500.

S. C., Johnsonville.—Stores of L. A. Taylor Mercantile Co., Jackson Huggins, H. Edward Eaddy and S. B. Poston.

S. C., Lake City.—Halcyon Hotel; loss \$12,000.

S. C., Newberry.—Barn leased by Johnson-McCrackin Co. and owned by Mrs. Alex. D. Hudson, 1101 K St. N. W., Washington, D. C.

Tenn., Camden.—First National Bank; loss \$15,000.

Tenn., Knoxville.—Hunter Settlement House, owned by Frank Lewis; loss \$5000.

Tenn., Memphis.—Walk-Over Shoe Store at 110 S. Main St., owned by Chas. E. Mason, 387 Avalon Pl.; loss \$4000 to \$5000.

Tex., Beckville.—F. T. Crawford's store, loss \$15,000; N. Parker & Son's store, loss \$15,000; Biggs' Drug Store, loss \$4000; Barber & Pruitt's store, loss \$4500.

Tex., Bowie.—City Drug Store; loss \$4000.

Tex., Houston.—South Texas Livery Stables, owned by H. D. Taylor Lumber Co.; Aherns-Ott Manufacturing Co.'s building; estimated loss \$80,000.

Va., City Point.—Mrs. Ella Foster's residence, 19 Prince George Ave., and hotel conducted by W. A. Smith.

Va., Hopewell.—Paris Hotel; loss \$15,000.

Va., Lancaster.—"Bayview," owned by Ball Estate and occupied by Maria Lou Ball and others.

Va., Newport News.—Residences of Mrs. Elizabeth Powell, Herman Stiebig, W. E. Carmen, H. C. Collins, Alexander Allen; loss \$15,000.

W. Va., Beryl.—Buxton-Landstreet Co.'s store, occupied in part by postoffice; Davis Coal & Coke Co.'s offices; loss \$20,000.

W. Va., Keystone.—Palace Barber Shop; Shor Department Store; People's Grocery Co.'s building; H. Broadnax Department Store; Pals & Vecellio Grocery Co.'s store, building owned by H. Totz, Northfork, W. Va.; Knights of Pythias Hall; R. H. Graves' residence, and other buildings; estimated loss \$250,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

Fla., Miami.—James H. Johnson will erect apartment-house.

Fla., St. Petersburg.—Mrs. A. M. McRae will erect apartment-house; 8 apartments.

Md., Baltimore.—Wm. A. Danner, Equitable Bldg., is having plans prepared by John



K. Stack, 12 E. Lexington St., Baltimore, for converting dwelling at Chase and Calvert Sts. into apartment-house; masonry; tin roof; wood floors; 2 dumbwaiters; cost \$9000 to \$7000; steam heat (gas fired); \$1000; electric lights; \$500; bids opened May 19. (Lately noted.)

Mo., Kansas City.—C. E. Templeton will erect 3-story 23-apartment flat; cost \$50,000.

Mo., Kansas City.—Ernst-Fluke Realty Co. will erect three 3-story 6-apartment flats; cost \$37,500.

Okla., Tulsa.—C. A. Owens will erect 2-story brick apartment-house; cost \$21,000.

Okla., Tulsa.—A. C. Dilling will erect 2-story frame apartment; cost \$5000.

S. C., Columbia.—Jas. L. Denney, Prest., Incptd., has plans by D. G. Zeigler, St. Matthews, S. C., for apartment-house; 198x298 ft.; brick, concrete and hollow tile; composition floors and roofing; cost \$140,000; hot-water heat, about \$30,000; passenger elevator; bids opened about June 15; construction begins about July 1. Address architect. (See Machinery Wanted—Building Materials.)

Tex., Houston.—Miss L. S. Koehler has plans by L. S. Green, Commercial Bank Bldg., Houston, for 3-story apartment-house; 8 apartments; gas and electric fixtures; screened sleeping porch; 6 stores on first floor; cost \$36,000. (Lately noted.)

Tex., Houston.—E. Houck will erect 3-story brick apartment-house; cost \$8000.

Va., Richmond.—C. D. Hobbs will erect brick apartment-house on Monument Ave. between Boulevard and Colonial Aves.; cost \$35,000.

### ASSOCIATION AND FRATERNAL

Ga., Brunswick.—Daughters of the American Revolution will erect clubhouse.

La., Vinton.—Masonic Building Association organized with \$12,000 capital by S. J. Welsh, Prest.; A. H. Foreman, V.-P.; M. J. Kaufman, Secy.-Treas.; will erect temple.

Tex., Fort Worth.—Directors of Masonic Orphans' Home have plans by Hubbell & Greene, North Texas Bldg., Dallas, for 2-story-and-basement dormitory; bids opened May 14.

### BANK AND OFFICE

Miss., Corinth.—Corinth Bank & Trust Co. is having plans prepared by Harker & Cairns, Memphis, Tenn., to remodel building.

Tenn., Camden.—First National Bank will rebuild bank building noted damaged by fire at loss \$15,000.

Tex., Abilene.—Citizens' National Bank has plans by David S. Castle, Abilene, for bank building; 2 stories; brick; stone trimmings; 50x90 ft.; first floor, banking quarters; upper floor, offices; plans completed about May 15; bids invited June 1; plumbing and electrical and heating contracts let separately; plans for furniture and fixtures completed May 18; bids received June 1; plans and specifications at office of architect after May 15. (See Machinery Wanted—Bank Fixtures and Furniture.)

Tex., Santa Anna.—First State Bank of Santa Anna is receiving bids to erect bank building; plans and specifications at office of bank.

Tex., Port Arthur.—C. H. Barnes will erect business building; probably offices on second floor. (See Stores.)

W. Va., Princeton.—Princeton Banking Co. is having plans prepared by A. F. Wysong, Princeton, for \$30,000 bank building.

W. Va., Princeton.—Virginia Bank of Commerce opens bids June 16 to erect bank building; 30x60 ft.; 2 stories; brick and stone; metal roof; concrete and wood floors; hot-water heat; electric lights; cost \$10,000; A. F. Wysong, Archt., Princeton, may be addressed.

### CHURCHES

D. C., Washington.—St. Paul's Catholic Church, Rev. Jas. E. Mackin, Pastor, 1425 V St. N. W., is having plans prepared by Murphy & Olmstead, 1413 H St. N. W., Washington, for towers on building; cost \$50,000. (Previously noted.)

Fla., Tarpon Springs.—Greek Congregation is having plans prepared by Nick Docos, Chicago, for \$50,000 Greek Cathedral.

La., Alexandria.—First Methodist Church is reported to erect Sunday-school building; H. H. White, Dr. W. D. Hass, W. D. Wadley and others, Trustees.

Md., Boonsboro.—Benevola United Brethren Church, Rev. C. M. Sparrow, Pastor, will erect building.

Md., Hamilton.—Mission of Grace Baptist Church will erect building at Harford Rd. and Echodale Ave.; about 50x60 ft.; frame

and cement block; slate roof; wood floors; steam heat; electric lights; Blanke & Zink, Archts., 835-37 Equitable Bldg., Baltimore, may be addressed. (Lately noted.)

N. C., Burlington.—First Christian Church is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for building; 2 stories and basement; brick and stone; tile roof; cost \$35,000; day labor; D. R. Fonville, Chrmn. Com. (Previously noted.)

Okla., Tulsa.—First Christian Church, Rev. J. W. Darby, Pastor, 322 S. Nagoles St., is having plans prepared by Van Slyke & Woodruff, Fort Worth, Tex., for building; 91x129 ft.; stone; marble balcony and stairs; main auditorium to seat 1200; indirect electric lighting; about 30 classrooms; gymnasium in basement; art glass dome 60x60 ft.; semi-fireproof; metal or tile roof; reinforced concrete and wood floors; cost \$80,000; furnace and fan-heating system, \$4000. (Previously noted.)

Tenn., Chattanooga.—Manker Memorial Methodist Church, Rev. Geo. J. Creswell, pastor, will remodel and erect addition to building.

Tex., Bryan.—Free Baptist Church has plans by C. E. Jenkins, Bryan, for building; 40x50 ft.; brick; tar and gravel roof; wood floors; stoves; city electric lights; cost \$7500; bids opened May 14. Address J. J. Tatum, Chrmn. Building Com. (Lately noted.)

Tex., Claude.—Baptist Church has plans by Will R. Kaufman, Amarillo, Tex., for building; 58x80 ft.; 2 stories and basement; concrete, brick and frame; tar and gravel roof; cement and pine floors; cost \$20,000; 1-pipe gravity steam heat (to be let separately from general contract), about \$1200; bids opened May 12. Address Rev. J. R. Hicks, Pastor, Claude, or architect as above. (Lately noted.)

W. Va., Charleston.—Bream Memorial Presbyterian Church has plans by Higginbotham & Knapp, Charleston, for building; 38x42 ft.; brick; composition roof; pine floors; cost \$5000. Address Chas. Wise, 707 Main St., Charleston. (Lately noted.)

W. Va., Keyser.—Methodist Episcopal Church South will erect building. Address The Pastor.

W. Va., Keyser.—Presbyterian Church will erect addition for Sunday-school room. Address The Pastor.

W. Va., Logan.—Presbyterian Church, Rev. F. C. Brown, Pastor, will erect building; cost \$10,000.

### CITY AND COUNTY

Ark., Pine Bluff.—Municipal Auditorium.—City will erect municipal auditorium; 3 stories; fireproof; auditorium to seat 900; 2 stores on first floor; second floor to be known as city administration floor; third for Chamber of Commerce and assembly hall. (Lately noted under Miscellaneous.)

D. C., Washington.—Market.—Secretary of Board of Commissioners, Room 509, District Bldg., receives bids until May 23 to construct shelters at Farmers' Market on B St., between 10th and 12th Sts. N. W.; plans and specifications at office Chief Clerk, Engineer Dept., Room 427 District Bldg.; Oliver P. Newman, Louis Brownlow and C. W. Kutz, Commrs.

Fla., Clearwater.—Jail and Courthouse.—Pinellas County Commrs. open bids June 19 to erect courthouse and jail. (See Court-houses.)

Ga., Macon.—Auditorium.—City opens bids May 28 to erect auditorium; 140x206 ft.; hollow tile and concrete; slate or composition roof; hollow tile and concrete floor construction; cost \$100,000; steam heat, \$5000; electric lights, \$2000; Alexander Blair, Archt., Macon; construction begins June 1. (Previously noted.)

Mo., St. Joseph.—Fire Department, etc.—City votes in June on \$690,000 bond issue to include \$100,000 for fire department; \$25,000 for workhouse; \$25,000 for emergency hospital; \$25,000 for repairs to police station; Chas. L. Faust, City Counselor.

Okla., Claremore.—Library.—Library Com., L. S. Robson, Prest., approved plans for proposed Carnegie library; brick; Carthage marble trim; steam heat; cost \$10,000.

Okla., Henryetta.—City Hall, etc.—Mayor and City Commrs. receive bids until May 26 to erect 2-story and basement brick, fireproof city hall, auditorium and fire station; cost \$53,500; plans and specifications at office Weathers & Trapp, Archts., 605½ W. California St., Oklahoma City, and W. H. Sullins, City Clerk. (Lately noted.)

Tenn., Knoxville.—Library.—City will erect Carnegie Library; John E. McMillan, Mayor, Tenn., Knoxville.—Library.—City, John E. McMillan, Mayor, receives bids until May 21

to erect Carnegie library; 44x66 ft.; 2 stories; ordinary construction; gravel roof; ordinary floor construction; steam heat; electric lights; cost \$10,000; plans and specifications at office Albert B. Baumann, Archt., 7th floor Henson Bldg., Knoxville. (Previously noted.)

Tex., Dallas.—Jail, etc.—City Commrs. will remodel fire station for jail and Corporation Court room; reported cost \$50,000.

Va., Pulaski.—Asylum.—Pulaski County Commrs. will soon call for bids to rebuild insane asylum at county poor farm to replace previously-noted burned structure; will issue \$15,000 bonds.

W. Va., Wheeling.—Home.—Ohio County lets contract about May 20 to erect home for poor; auditorium to seat 150; 50 sleeping rooms; cost \$75,000; E. F. Haller, Court-house Commr.; F. F. Faris, Archt., Schmubach Bldg., Wheeling. (Lately noted.)

### COURTHOUSES

Fla., Clearwater.—Pinellas County Commissioners open bids June 19 to erect courthouse and jail; 2 stories and basement; 150x100 ft.; granite base up to first floor; brick with limestone trimmings above; portico in center with 4 stone columns 34 ft. high; courtroom 54x56 ft.; marble wainscoting 5 ft. high; 2 marble stairways; oak interior finish; cost \$160,000; Francis J. Kennard, Archt., American National Bank Bldg., Tampa. (Previously noted.)

S. C., Saluda.—County is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for courthouse for which \$50,000 bonds were voted; plans ready by June 1. (Previously noted.)

Tenn., Chattanooga.—Treasury Dept., Washington, D. C., rejected bids for extension of courthouse and postoffice. (See Government and State.)

### DWELLINGS

Ark., Little Rock.—J. N. Moxley, 2701 Gaines St., will erect residence; 2 stories; 7 rooms; frame; asphalt shingle roof; cost \$3000; plans and construction. (Lately noted.)

Ark., Marianna.—W. L. Osborn, Marshalltown, Iowa, will not erect residence as lately noted.

D. C., Washington.—B. H. Gruver, Union Trust Bldg., has plans by Geo. T. Santmyers, 921½ New York Ave. N. W., Washington, for 8 frame dwellings at 806-820 Whittier Pl.; cost \$24,000.

D. C., Washington.—Charles E. Wire, 1413 H St. N. W., will erect 3 frame and 3 brick dwellings at 5403 Thirty-ninth St., 4114 Fessenden St., 3707 Keokuk St. and 219-23 Seaton Pl. N. E.; cost \$20,500.

D. C., Washington.—Willis Harlan has plans by S. E. Snyder, 2350 Q St. S. E., Washington, for brick dwelling at 2332 High St. S. E.; cost \$3000.

Fla., Bokaelia.—Mrs. Lucy Fulton, Uniontown, Pa., will erect residence.

Fla., Daytona.—Jas. B. Moore, 146 Ridge-wood Ave., will erect 2 bungalows.

Fla., Jacksonville.—J. C. Pritwood will erect 2-story frame residence; cost \$3200.

Fla., Madison.—W. B. Stewart will erect residence to replace burned structure.

Fla., Miami.—Alice Baldwin will erect residence; cost \$3500.

Fla., Miami.—C. W. Hill will erect \$5000 residence.

Fla., Miami.—Mrs. M. Griffith will erect 3 dwellings; cost \$10,000.

Fla., St. Augustine.—Alec. Solano will erect residence.

Fla., St. Petersburg.—H. J. Winchell will erect 2 dwellings at 7th St. and 7th Ave.; cost \$3000.

Fla., St. Petersburg.—C. M. Roser will erect bungalow on Eighth Avenue, South, between 6th and 7th Sts.; cost \$3000.

Ga., Atlanta.—Mrs. Nora G. Webb will erect 1-story brick-veneer dwelling; cost \$4000.

Ga., Atlanta.—Lucien Knight will erect residence; 1 story; brick veneer; stone trim; 42x120 ft.; cost \$16,000.

Ga., Augusta.—B. S. Dunbar is reported to erect residence.

Ga., Dalton.—Geo. Albertson will erect 2 bungalows.

Ga., Gainesville.—Dan Palmour will erect residence.

Ga., Hawkinsville.—E. O. Daniel will erect residence to replace structure burned at loss of \$3000.

Ga., Hawkinsville.—S. Y. Henderson is

erecting 9-room bungalow; construction in charge of S. W. Conner, Hawkinsville.

Ga., Macon.—Mrs. J. K. Patillo will erect brick residence; cost \$4500.

Ga., West Point.—Mrs. La Fayette Lanier will erect 2-story brick residence to replace structure lately-noted damaged by fire.

Ky., Louisville.—N. D. Abell will erect brick-veneer dwelling; cost \$4400.

La., Alexandria.—Western Lemoline will erect residence.

Md., Baltimore.—Chas. E. Litzinger, 3678 Falls Rd., has plans by F. E. Beall, 306 St. Paul St., Baltimore, for 11 dwellings on 34th St., between Cedar and Chestnut Aves.; 136x46 ft.; brick; slag roof; wood floors; steam heat; gas and electric lights; cost \$22,000; construction by owner, who may be addressed. (Lately noted.)

Md., Baltimore.—Richard Von Hohenhoff, 2625 Barclay St., has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for store and dwellings (9 buildings) at 2627-43 Barclay St.; one, 17x50 ft. and eight 14x42 ft.; ordinary brick construction; slag roof; wood floors; steam heat; electric lights; cement sidewalks; cost \$2000 each; construction by owner. (Lately noted.)

Miss., Sumner.—Dr. R. L. Casburn has plans by McGee & Lester, Memphis, Tenn., for residence; hollow tile; composition shingle roof; wood floors; hot-water heat; electric lights; cost \$10,000. (Lately noted.)

Mo., Kansas City.—L. L. Marcell, Prest., Chanute Refining Co., Chanute, Kan., is having plans prepared for residence.

Mo., Kansas City.—J. R. Hunter of J. W. Jenkins Sons Music Co. will erect dwelling.

Mo., Kansas City.—Mrs. Alice G. Jackson will erect residence.

Mo., Kansas City.—A. Freeman will erect 2 frame dwellings; cost \$6000.

Mo., Kansas City.—H. K. Seltzer will erect 2-story dwelling; cost \$10,000.

Mo., Kansas City.—Prospect Vista Land Co. will erect three 1 and four 2-story stucco-veneer dwellings; cost \$14,000.

Mo., Kansas City.—H. D. Belcher will erect residence; 2 stories; stucco veneer; cost \$5000.

Mo., Kansas City.—Rohe Construction Co. will erect 2-story stone and brick-veneer dwelling at 4211 Brooklyn St.; cost \$5000.

Mo., Kansas City.—E. C. Ward will erect five 1-story frame dwellings; cost \$10,000.

Mo., Kansas City.—F. M. Sutton will erect two 2-story brick-veneer dwellings; cost \$5500.

N. C., Kernersville.—Geo. V. Fulp has plans by Mr. Hendrix, Winston-Salem, N. C., for \$3000 residence.

N. C., Rocky Mount.—W. W. Avera has plans by W. B. Camp, Jacksonville, Fla., for bungalow; 26x47 ft.; frame; asphalt shingle roof; pine floors with oak finish; city electric lights; cost \$3200; bids opened about May 29. Address owner.

N. C., Winston-Salem.—J. D. Slawter will erect \$4000 residence.

N. C., Winston-Salem.—B. N. Sullivan will erect dwelling on 4th St.; cost \$4000.

Okla., Oklahoma City.—E. C. Ross will erect three 1-story and one 2-story dwellings; cost \$12,500.

Okla., Oklahoma City.—E. N. Redman will erect twelve 1-story frame dwellings in Shields Addition; total cost \$13,000.

Okla., Oklahoma City.—W. W. Conners will erect two 1-story frame dwellings; cost \$4000.

Okla., Tulsa.—A. D. Kennedy will erect 2-story and basement residence; frame and stucco; cost \$4000.

Okla., Tulsa.—Dr. Wm. Harrison will erect dwelling; 2 stories; frame and stucco; cost \$5000.

Okla., Tulsa.—Fritz Chastaine will erect residence; 2 stories; frame; brick foundation; cost \$4000.

Okla., Tulsa.—Mrs. W. A. Dutton is receiving bids to erect 2-story frame residence; J. W. Robb, Archt., Ohio Bldg., Tulsa.

Okla., Tulsa.—C. L. Love will erect \$3000 residence.

Okla., Tulsa.—W. L. Kistler will erect residence; cost \$4750.

Okla., Tulsa.—Addie Arpus will erect 2-story frame residence; cost \$5300.

Okla., Tulsa.—C. J. Hindman will erect 2-story frame residence; cost \$4000.

Okla., Tulsa.—E. A. Siegemont will erect 1-story frame residence; cost \$3500.

Okla., Tulsa.—Geo. W. Graves will erect 1-story frame residence; cost \$3000.

Okla., Tulsa.—W. M. McDermott will erect 1-story frame residence; cost \$3500.

Okl., Tulsa.—R. E. Dowling has plans by John V. Starr, Tulsa, for dwelling; 40x48 ft.; brick and hollow-tile walls; wood joists; slate roof; hardwood floors; city electric lights; cost \$20,000; hot-water heat, \$2000; bids opened May 20. (Lately noted.)

S. C., Anderson.—A. G. Fretwell is having plans prepared by C. Gadsden Sayre, Anderson, for residence; frame; cost \$3500.

S. C., Anderson.—Clarence Beatty is having plans prepared by C. Gadsden Sayre, Anderson, for frame residence; 2 stories; cost \$3500.

S. C., Beaufort.—Old Fort Improvement Co. will erect cottages, etc.—See Hotels.)

S. C., Laurens.—Wm. Gelder is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for \$15,000 brick bungalow.

S. C., Newberry.—Geo. W. Sumner, Sr., has plans by J. E. Sumner, Greenwood, S. C., for residence; 60x70 ft.; brick veneer; wood shingle roof; steam heat; electric lights; cost \$12,000; day labor. Address owner. (Lately noted.)

Tenn., Chattanooga.—Walter Marr is having plans prepared by J. D. Alsop, James Bldg., Chattanooga, for residence on Signal Mountain; pink mountain stone; refrigerator plant; garage and work shop; cost \$25,000.

Tex., Austin.—T. H. McGregor will erect 2-story wood and stucco dwelling; cost \$7000.

Tex., Dallas.—C. F. Knott will erect residence; 8 rooms; 2 stories; frame; cost \$3000.

Tex., Dallas.—Sue C. Lynch will erect 10-room 2-story frame residence; cost \$3500.

Tex., Dallas.—J. A. Moore will erect 16-room 2-story tile residence; cost \$7000.

Tex., Dallas.—Miss Birdie Tucker will erect 16-room 2-story frame residence; cost \$3000.

Tex., Dallas.—J. W. Revier will erect dwelling; 16 rooms; 2 stories; frame; cost \$3750.

Tex., Dallas.—W. E. Robinson will erect 7-room residence; cost \$4000.

Tex., Dallas.—William Thompson will erect 10-room 2-story tile residence; cost \$12,500.

Tex., El Paso.—George Goodman will erect 2 tenements; cost \$6000.

Tex., Houston.—Houston Land Corporation contemplates erecting 100 dwellings during 1917; 22 under construction; hollow tile, frame and stucco or frame and brick-veneer exterior; cost \$4000 to \$15,000. (Lately noted.)

Tex., Pittsburg.—G. A. Hess will erect 2-story residence.

Tex., San Antonio.—B. C. Lane will erect 6-room dwelling; cost \$3000.

Tex., San Benito.—H. J. Week is having plans prepared by Ye Planry, Dallas, for residence; 50x46 ft.; brick; tile roof; wood floors; individual electric-light plant; construction begins June 1. (Lately noted.)

Va., Deerfield.—Augusta Wood Products Corp., 1428 S. Penn St., Philadelphia, Pa., will erect number of cottages. (See Hotels.)

Va., Harrisonburg.—Dr. J. R. Gambill has plans by Otto H. Miller, McLachlen Bldg., Washington, D. C., for dwelling; 33x42 ft.; hollow tile and stucco; slate roof; wood partitions and floors; 3 baths; hot-water heat; construction by owner.

Va., Richmond.—T. W. Crump will erect \$3000 brick dwelling.

Va., Richmond.—W. L. Wills will erect dwelling; brick; cost \$13,300.

Va., Richmond.—Muhleman & Kayhoe will erect brick dwelling on Leonard St.; also brick dwelling on Kensington Ave.; cost \$6000.

## GOVERNMENT AND STATE

Ark., Fordyce.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids June 22 to erect postoffice; drawings and specifications from custodian of site at Fordyce, and Mr. Wetmore, Washington.

Ky., Louisville.—Postoffice.—Government will repair postoffice building; change openings in present screen, construct stamp booth in lobby and remove and replace partition around registry division; bids received until May 15 by Warner S. Kinkaid, Custodian.

Md., Cambridge.—Postoffice.—Treasury Department, Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., opens bids June 21 to erect postoffice; plans and specifications from custodian of site at Cambridge and Mr. Wetmore, Washington.

S. C., Beaufort.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Super-

vising Archt., Washington, D. C., opens bids June 20 to erect postoffice; drawings and specifications from custodian of site, Beaufort, and Mr. Wetmore as above.

Tenn., Chattanooga.—Postoffice and Court-house.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., rejected bids for extension of court-house and postoffice. (Previously noted.)

Tex., Aransas Pass.—Dwelling.—United States Lighthouse Service will erect 6-room double dwelling; iron columns; pile foundation; alternate bids on either frame or hollow-tile construction received until June 1; asbestos shingle roof; double wood floors; cost \$15,000. Address Lighthouse Inspector, Room 320 Custom-house, New Orleans. (Lately noted.)

Tex., Commerce.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice building; Algernon Blair, Montgomery, Ala., low bidder at \$45,300 for limestone construction. (Previously noted.)

Tex., Denton.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., receives bids until June 8 to erect postoffice; 1 story and basement; brick and stone; steam heat; electric fixtures; drawings and specifications from custodian at site, Denton, and Mr. Wetmore, Washington. (Lately noted.)

## HOSPITALS, SANITARIUMS, ETC.

Ala., Mobile.—City receives bids to erect annex to Mobile City Hospital; plans and specifications at office Geo. B. Rogers, Archt., 1010 Van Antwerp Bldg., Mobile. (Previously noted to erect \$10,000 brick, steel and glass amphitheater.)

Mo., St. Joseph.—City votes in June on \$25,000 bonds to erect lately-noted emergency hospital. (See City and County.)

Tenn., Memphis.—Tri-State Baptist Hospital has plans by H. J. Harker, Sawyer Bldg., St. Louis, for 8-story addition; 70x110 ft.; cost \$75,000.

Tenn., Memphis.—Circle of Good Deeds of King's Daughters of Memphis (Daniel Huger, Frank Milton and others) plans to build Tri-State Hospital School for Crippled Children; for children of Arkansas, Mississippi and Tennessee; initial capacity 40 beds; Joe P. Sullivan of Van Leuven Browne Hospital School, Detroit, Mich., is interested.

Va., Abingdon.—Trustees of George Ben Johnson Memorial Hospital are having plans prepared by Thos. S. Brown, Bristol, Va.—Tenn., for main hospital building; reinforced concrete construction; exterior walls faced with rough texture brick; steam heating plant with high pressure boiler which will also furnish power for running passenger elevator; colonial style with sun parlor porches at each end, galls of latter set in metal frames; cost \$40,000 exclusive of equipment; contemplate erecting unit on each side later. (Lately noted.)

W. Va., Princeton.—Dr. W. H. Wallingford has plans by A. F. Wysong, Princeton, for hospital addition; 60x75 ft.; 2 stories; brick; canvas roof; concrete and wood floors; hot-water heat; electric lights; cost \$15,000; electric elevator, \$2000; bids opened May 17. Address Architect.

## HOTELS

Fla., Fellsme.—Owner of Broadway Hotel is having plans prepared by Wm. Newton to remodel building.

Fla., Miami.—I. N. Bradshaw, Gloucester, N. J., acquired Fort Dallas Hotel and is reported to expend \$50,000 for improvements. (Mrs. Lillie M. Flanagan previously noted to erect addition to building.)

Fla., Sanford.—Frank L. Miller will erect tourist hotel.

Fla., St. Augustine.—Owner of Gerstel Bldg. will enlarge and remodel building for hotel; erect 16 additional rooms, making a total of 33 rooms; stucco-veneer front; install hot and cold running water; electric lights.

Md., Hagerstown.—Frank L. Hamilton, Charles Town, W. Va., acquired 4-story building at Potomac and Antietam Sts., and plans to convert into 75-room hotel, erecting 2 additional stories, plumbing fixtures, heating, elevators, kitchen equipment, tile floors, marble wainscoting, lighting fixtures, plate and ornamental glass, fire escapes, ornamental iron stairways, electrical equipment, etc.; cost about \$30,000; H. E. Yessler, Archt., Hagerstown. (Lately noted.)

Mo., St. Louis.—Sam Koplar, 1337 Walton Ave., will erect hotel apartment at 533 Ber-

lin St.; 60x154 ft.; concrete skeleton; composition roof; cement floors; cost \$250,000; Warren-Webster heating system, \$15,000; 2 Otis passenger elevators, \$7500. (Lately noted.)

N. C., Greensboro.—Hotel Building Co. opens bids May 18 (extended date) to erect O'Henry Hotel; 75x150 ft.; reinforced concrete; tar and gravel roof; cement and tile floors; low-pressure steam heat; 2 alternating-current elevators; cost \$300,000; W. L. Stoddart, Archt., 9 E. 40th St., New York. Address Owners. (Lately noted.)

N. C., Pilot Mountain.—C. M. Bernard is reported to erect building to contain 4 stores and hotel; private water and sewer connections.

S. C., Beaufort.—Old Fort Improvement Co. Incptd. with \$200,000; Geo. Waterhouse, Prest.; R. C. Horne, Jr., Secy.-Treas.; will develop 50-acre site, erect hotel, cottages, etc.

Va., Deerfield.—Augusta Wood Products Corp., 1428 South Penn Square, Philadelphia, Pa., and Deerfield, Va., will erect hotel and number of cottages for employees; hotel to accommodate 50; cottages to have 4 rooms, electric lights, running water, etc.

## MISCELLANEOUS

Ga., Macon.—Fair.—State Fair Assn., Harry C. Robert, Secy., will improve fair grounds, to include erection of 2 swine sheds, cattle shed, barns, restaurant, install concrete floor in automobile building, etc.

Ky., Louisville.—Auditorium.—Louisville Auditorium Co. rejected all bids to erect auditorium and will call for new bids, date for receiving same not decided; plans by D. X. Murphy & Bro., Louisville, call for structure 157x198 ft.; steel skeleton; trussed roof and balcony; composition roofing; concrete and tile floors; heat and light from outside sources. (Previously noted.)

Md., Baltimore.—Home.—Directors of Anchorage, home for seamen, at Broadway and Thames St., will erect addition to building.

Mo., Kansas City.—Barn.—Mrs. Frances Hyde will erect 1-story metal covered barn; cost \$4000.

N. C., Raleigh.—Fair.—State Fair Assn., Joseph E. Pogue, Secy., will soon let contract to erect \$100,000 building.

Okl., Oklahoma City.—Fair Building.—State Fair Assn. will erect liberal arts hall on State Fair Grounds; steel and concrete; cost \$100,000; date opening bids not set. Address I. S. Mahan, Secy. State Fair.

Tex., Beaumont.—Clubhouse.—Frying Pan Club, Charles Ledwidge, Prest.; Joe Solinsky, Secy., will erect clubhouse.

Tex., Dallas.—Sheds.—Shippers Compress Co. will erect sheds and fire walls; cost \$28,000.

Tex., Dallas.—Clubhouse.—Cedar Crest Country Club, H. B. Webster, 1610 Southwest Life Bldg., and others, lets contract in 30 to 60 days to erect lately-noted clubhouse; 56x116 ft.; first story, stone or brick; upper story, wood; fireproof roof; steam or hot-water heat; cost \$30,000; Orlopp & Orlopp, Archts., Dallas. (See Machinery Wanted—Roofing; Lockers; Club Fixtures; Plumbing Equipment.)

## RAILWAY STATIONS, SHEDS, ETC.

Ark., Bentonville.—St. Louis & San Francisco R. R., F. G. Jonah, Chief Engr., St. Louis, will erect depot.

Okl., Oklahoma City.—Chicago, Rock Island & Pacific Ry., C. A. Morse, Ch. Engr., Chicago, and St. Louis & San Francisco R. R., F. G. Jonah, Ch. Engr., St. Louis, will soon begin erection of \$300,000 union depot according to supplemental plans. (Previously noted.)

W. Va., Huntington.—Baltimore & Ohio R. R. Co., H. A. Lane, Ch. Engr., Baltimore, will erect 100-ft. extension to freighthouse at Second Ave. and 11th St.; construction by company's force; cost \$3000 to \$5000.

W. Va., Logan.—Chesapeake & Ohio Ry., F. I. Cabell, Chief Engr., Richmond, Va., plans to erect freight and passenger station.

## SCHOOLS

Ark., Argenta.—Shorter College will erect \$30,000 dormitory to replace lately-noted structure damaged by fire.

Fla., Haines City.—Board of Public Instruction, Bartow, Fla., is having plans prepared by A. C. Price and J. Rice Scott, Associated Archts., Bartow, for \$10,000 school building. (Lately noted.)

Fla., Jacksonville.—Duval County Board of Public Instruction, F. A. Hathaway, Supt., Room 203, Courthouse, receives bids until June 9 to erect school at 5th and Hub-

bard Sts.; 102x220 ft.; brick; 16 rooms; semi-fireproof; concrete floors; hollow-tile partitions; steel roof trusses over auditorium; slab and beam floor construction; composition roof; cost \$80,000; plans and specifications at office R. A. Benjamin, Archt., Jacksonville. (Previously noted.)

Fla., Lake Wales.—Board of Public Instruction, Bartow, Fla., is having plans prepared by A. C. Price and J. Rice Scott, Associated Archts., Bartow, for \$25,000 school building. (Previously noted.)

Fla., Laurel Hill.—Laurel Hill Special Tax School Dist. rejected all bids to erect school and will call for new bids; plans by S. J. Welch, Pensacola, call for structure 33x76 ft.; 2 stories; brick; asbestos shingle roof; pine floors; steam heat; independent electric light plant; cost \$12,000. (Previously noted.)

Ga., Atlanta.—Atlanta-Southern Dental College organized by consolidation of Southern Dental College and Atlanta Dental College, Dr. S. W. Foster, Prest.; will expend \$40,000 to erect buildings at 100 N. Butler St.; install laboratory equipment with 100 dental chairs, etc.

Ga., Gainesville.—Riverside Academy, Sandy Beaver, owner, will rebuild burned structure; will erect Lanier Hall and provide gymnasium.

Ga., Smyrna.—Board of Education has plans by J. F. Leitner, Healey Bldg., Atlanta, for graded school; 87x109 ft.; ordinary construction; 5-ply pitch and gravel roof; fan-furnace heating and ventilating; bids opened in about 2 weeks. (Lately noted.)

Ky., Elizaville.—Elizaville School District voted \$10,000 bonds to erect school. Address Dist. School Trustees. (Lately noted.)

La., Alexandria.—Enterprise School Dist. No. 39, Parish of Rapides, votes June 5 on tax to purchase site, erect and equip school; Welchton-Latanier School Dist. No. 38 also votes same date on tax to purchase sites, erect and equip schools; J. W. Bolton, Prest. Rapides Parish School Board.

La., Lafayette.—City will soon let contract to erect \$30,000 school building. Address The Mayor.

La., New Orleans.—School Board will not erect lately-noted normal school, but will erect elementary school for annexes to McDonogh schools; \$135,000 available.

Miss., Arkabutla.—Board of Trustees, Arkabutla Consolidated School Dist., receives bids until June 5 at Court House at Senatobia, Miss., to erect school building; plans and specifications at office Raymond B. Spencer, Archt., 205-06 New Millsap's Bldg., Jackson, Miss.; W. A. May, Secy. School Board, Arkabutla.

Miss., Gulfport.—Harrison County Board of Supervisors will issue \$4000 bonds for Harrison-Jackson County Line School; Jackson County Supervisors, Pascagoula, Miss., also reported to issue similar amount of bonds.

Miss., Meridian.—City will vote on \$10,000 bonds for repairs to following schools: High School, Junior High School, Stevenson School, Witherspoon School, Chalk School, South Side School, Highland School, Fewell Survey School, Wechsler School, East End and West End Schools; Jno. M. Dabney, Mayor. (Lately noted.)

Miss., Tchula.—Board of Trustees of Tchula Separate School Dist., O. M. Arnett, Chrmn., receives bids until June 5 to erect brick and frame school building; plans and specifications at office N. W. Overstreet, Archt., Jackson, Miss., and office Mr. Arnett. (Previously noted.)

Mo., Amity.—School Board, W. E. Moore, Secy., will erect school building; H. W. Underhill & Co., Archts., Bryant Bldg., Kansas City, Mo.; bids opened May 14.

Mo., Canady.—Canady School Board, H. L. Watkins, Prest., receives bids until May 26 to erect 1-story school building; plans and specifications at office M. E. Worcester, Archt., Exchange Bldg., Caruthersville, Mo.

Mo., Miller.—Board of Education, School District of Miller, Chas. Henry, Secy., receives bids until May 18 to erect high school building according to plans and specifications by J. L. Heckenlively, Archt., Springfield, Mo.; bid No. 1, building complete; bid No. 2, cement floor in basement, corridors, boilers and toilet-rooms only.

Mo., Weatherby.—School District No. 10, Henry Harper, Clerk, will erect school buildings; bids received until May 15; H. W. Underhill & Co., Archts., Bryant Bldg., Kansas City, Mo.

N. C., East Bend.—Board of Education of East Bend Graded School Dist. receives bids until May 28, to erect school; brick; 28x30 ft.; 2 stories; annex 40x60 ft.; 1 story; plans and specifications at office J. M. Whit-



tington, Tenn.; 9 rooms and auditorium; cost \$800; Joel Hill, Archt., Winston-Salem, N. C. (Lately noted.)

N. C., Farmington.—Farmington School District voted \$5000 bonds to erect high school. Address District School Trustees. (Lately noted.)

N. C., Mineral Springs.—Mineral Springs School District will erect \$10,000 brick building. Address District School Trustees.

N. C., Pleasant Garden.—County Commrs. ordered vote June 19 on \$40,000 bonds to enlarge and improve high school building at Pleasant Garden and remodel other buildings.

N. C., Rich Square.—Rich Square School Dist. votes June 16 on \$25,000 bonds. Address Dist. School Trustees.

Okl., Bradley.—City voted \$12,000 bonds to erect addition to school building; Bramblet & Huseman, Archts., Oklahoma City. (Lately noted.)

Okl., Lahoma.—Trustees have plans by R. W. Shaw, Enid, Okla., and opens bids about June 15, to erect high school; 52x72 ft.; brick; slate roof; wood floors; cost \$15,000; heating \$250; Address D. Mellick, Lahoma. (Lately noted.)

Okl., Red Fork.—Red Fork School District No. 25 will erect high school; bids received until May 16 by O. C. Brooks, Clerk Board of Education; plans and specifications at office M. C. Cross and H. H. Mahler, Archts., Room 16, Nebraska Bldg., Tulsa, Okla. (Previously noted.)

S. C., Anderson.—School Trustees have plans by Jas. J. Baldwin, Anderson, for high school; Collegiate Gothic style; tapestry brick; stone and terra-cotta trim; auditorium 52x60 ft., with seating capacity, including gallery, of 750; stage 25x15 ft.; 2 drinking fountains in main corridor on each floor; gymnasium; locker and shower-rooms; manual training and domestic science equipment, etc.; semi-fireproof construction; cost about \$80,000. (Previously noted.)

S. C., Duncan.—Duncan School Dist. voted bonds to erect \$7000 school. Address Dist. School Trustees.

S. C., McClellanville.—McClellanville High School trustees will erect building to replace burned structure; \$10,000 bonds voted.

Tenn., Chattanooga.—City will expend \$27,000 to erect additions to following schools: Four-room addition at Oak Grove school; 2-room additions at Hemlock, Chestnut Street and Chattanooga Avenue schools. Address Mayor Littleton.

Tenn., Charleston.—Grammar School Board, W. L. Humphrey, Chrmn., opens bids May 25 to erect building; 2 stories and basement; plans and specifications at office Clarence T. Jones, Archt., James Bldg., Chattanooga, and Sam. Y. Adeock, County Supt. of Schools, Cleveland, Tenn.

Tenn., Knoxville.—City commission reduced provisional appropriation for school improvements from \$250,000 to \$150,000, and passed on final reading ordinance authorizing bond issue; John E. M. Millan, Mayor. (Lately noted to vote July 5 on ordinance authorizing \$250,000 bonds for schools, \$150,000 for auditorium and \$50,000 for park and playground extension.)

Tenn., Lewisburg.—Marshall County defeated \$55,000 school-building bonds. (Lately noted.)

Tenn., Memphis.—Circle of Good Deeds of King's Daughters of Memphis plans to build Tri-State Hospital School for Crippled Children. (See Hospitals.)

Tex., Abilene.—Simmons College has plans by David E. Castle, Abilene, for lately-noted gymnasium; 3 stories; 55x80 ft.; semi-fireproof; cost \$20,000; plans completed June 1; bids on equipment considered about June 15. (See Machinery Wanted—Gymnasium Equipment.)

Tex., Bartlett.—School Board has plans by C. H. Leimbach, Dallas, Tex., for 2-story and basement school; bids opened May 16. (Previously noted to have voted \$12,000 school bonds.)

Tex., Beaumont.—School Board will remodel high school; iron columns; rearrangement of sanitary equipment, etc.; will soon call for bids. (Lately noted reported to erect high school.)

Tex., Damon.—Damon Mound School District will erect building. Address District School Trustees.

Tex., Hutto.—Trustees are having plans prepared by C. H. Leimbach, Dallas, for \$20,000 school.

Tex., Guion.—School Board receives bids through R. S. Glenn, Archt., Abilene, Tex., until May 21 to erect 4-room brick school building; cost \$6000. (Lately noted.)

Tex., Hillsboro.—Dr. P. A. Roberts will receive bids to erect 2 ward schools; cost \$33,000; plans and specifications at office T. J. and J. O. Galbraith, Archts., Slaughter Bldg., Dallas, and Elks' Bldg., Hillsboro. (Lately noted.)

Tex., Megargel.—Board of Education, J. M. Spoonts, Secy., receives bids until May 19 to erect 2-story brick school building; cost \$10,000; plans and specifications at office School Board, Megargel, and K. S. Glenn, Archt., Abilene, Tex. (Lately noted.)

Tex., Quanah.—Trustees are having plans prepared by C. H. Leimbach, Dallas, for high school; cost \$40,000, including equipment. (Previously noted.)

Tex., Schwertner.—Trustees are having plans prepared by C. H. Leimbach, Dallas, for \$10,000 school.

Tex., Sour Lake.—Secy. School Board receives bids until May 25 to erect high-school building, for which \$80,000 bonds were voted; reinforced concrete; 2 stories; 20 rooms; plans and specifications at office M. L. Waller, Archt., Fort Worth. (Lately noted.)

Va., Altavista.—Trustees of Otter River School Dist. will erect school to replace structure lately noted damaged by fire; having plans prepared for 10-room brick building; cost about \$15,000; completion by Oct. 1; G. W. Lane, Chrmn. Board.

Va., Bristol.—Virginia Intermont College is having plans prepared by C. B. Kearfott, Bristol, Tenn., for building for swimming pool and laundry; 40x60 ft.; 2 stories; swimming pool, 29x55 ft.; cost about \$15,000; will also remodel main building; install showers on every floor, repair heating and plumbing equipment, repaper, etc.

Va., Mt. Jackson.—School Board of Ashley Dist., W. H. Tisinger, Clerk, receives bids until May 21 to erect Triplet High and Vocational School; plans and specifications at office Mr. Tisinger.

W. Va., Beckley.—Town Dist. School Board lets contract May 19 for excavation and foundation work on district high school.

## STORES

Ark., Pine Bluff.—City will erect municipal auditorium to contain 2 stores on first floor. (See City and County.)

Fla., Key West.—I. Grossman will erect business building.

Ga., Bridgeport.—J. B. Shepard of Shepard Mercantile Co. will erect building to replace burned structure.

Ga., Savannah.—Maria Moylan Estate will erect 2-story brick building to replace present structure.

Ga., Thomson.—J. E. Wilson will erect brick store building.

Md., Baltimore.—Richard Von Hohenhoff, 2625 Barclay St., will erect store and dwellings at 2627-43 Barclay St. (See Dwellings.)

Mo., Kansas City.—Korphae Realty Co. will erect 2-story brick business building; cost \$14,000.

Mo., Kansas City.—Dr. H. W. Gatchel will erect 2-story brick business building; cost \$20,000.

Mo., St. Louis.—Lewis E. Balson, 5899 Delmar Ave., will erect store building; 35.6x100 ft.; brick; white enamel interior; gravel roof; concrete floors; cost \$5000; plans and construction by owner. (Lately noted.)

N. C., Burlington.—Alamance Bank & Trust Co. is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for stores; day labor.

N. C., Gastonia.—W. L. Balthis, G. W. Rangan, E. N. Hahn and T. E. Summerrow of Gastonia Furniture Co., will erect 3 adjoining store buildings; 2 stories; 160 ft. deep; concrete basement; total cost \$30,000.

N. C., Pilot Mountain.—C. M. Bernard will erect building to contain 4 stores. (See Hotels.)

N. C., Winston-Salem.—Badin Supply Co., John Frazier, Mgr., has plans by Mr. Hendrix, Winston-Salem, for addition to store building; 25x110 ft.

Okl., Tulsa.—Hunt Company will expend \$10,000 to remodel building at 313-15 S. Main St.

Okl., Tulsa.—R. T. Daniel is having plans prepared by J. P. Curtin, Tulsa, for 2-story addition to Daniel Bldg., to be occupied by Scott-Halliburton-Abbott; brick and terra cotta; cost \$30,000. (Lately noted.)

Tex., Dallas.—B. A. Parrish will erect 1-story tile store; cost \$3000.

Tex., Dallas.—Schneider & Reinhardt will erect 3-story brick store building; cost \$20,000.

Tex., Dallas.—Sidney Reinhardt will erect 1-story brick store building; cost \$12,000.

Tex., Dallas.—Mrs. Kirk Hall will erect 1-story brick store; cost \$5000.

Tex., Dallas.—Essarman & Guidera will erect 1-story brick store building; cost \$5000.

Tex., Dallas.—W. P. Hiebert will erect 1-story brick store; cost \$5000.

Tex., Houston.—Miss L. S. Koehler will erect apartment-house; stores on first floor. (See Apartment-Houses.)

Tex., Oakwood.—Robt. Mayes will erect store and bank building to replace structures lately noted damaged by fire; 25x80 ft.; brick; gravel roof; concrete floors; cost \$3000 each; bids opened May 12.

Tex., Oakwood.—E. P. Murdock, S. H. Hunt and T. M. McMillan will erect store buildings to replace structures lately noted damaged by fire; brick; metal roof; cement floors and sidewalks; cost \$4000 each.

Tex., Oakwood.—C. H. Blackshear, T. M. McMillan and Robt. Mayes will erect buildings to replace burned structures; 25x100 ft.; brick; cement and wood floors.

Tex., Port Arthur.—C. H. Barnes will erect 2-story brick business building; second floor for offices or rooming-house.

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

D. C., Washington.—R. E. Skinker let contract to Skinker & Garrett, 1416 F St. N. W., Washington, to erect apartment-house at 1740 K St. N. W.; thirty-two 1 to 4-room suites; exterior Turkish brick; stone and marble trim; ornamental glass marquise over main entrance; halls finished in marble and tile; cost \$65,000; James H. Grant, Archt., 526 Eighth St. N. E., Washington.

Fla., St. Petersburg.—H. Walter Fuller let contract to Rising Construction Co., St. Petersburg, to erect store and apartment building; 40x120 ft.; brick and stucco; tile and asbestos shingle roof; tile floors; steam heat; cost \$20,000; H. H. Dupont, Archt., St. Petersburg. (Lately noted to be erected by James Allen Smith.)

Ga., Albany.—C. D. Smith let contract to Smith & Watson, Albany, to erect two apartment-houses, 4 suites each; 45x73 ft.; brick walls; frame interior; 5-ply asphalt roof; pine floors with oak finish; city electric lights; cost \$10,000 each; W. B. Camp, Archt., Jacksonville, Fla. Address owner.

La., New Orleans.—Mrs. C. Siler let contract to erect duplex apartment-house; Jones & Roels, Archts., Maison Blanche Bldg., New Orleans.

### ASSOCIATION AND FRATERNAL

D. C., Washington.—I. O. O. F. let contract to Geo. A. Fuller Co., Munsey Bldg., Washington, to erect lodge and store building; 77x120 ft.; 7 stories and basement; structural steel; slag roof; tile and concrete floors; low-pressure steam heat; Otis elevators; cost \$200,000; W. S. Plager, Archt., 1930 Kearney St. N. E., Washington. (Previously noted.)

Ga., Fort McPherson (R. R. Sta. Atlanta). Y. M. C. A. let contract to R. M. Walker, Atlanta, to erect army association building; 40x100 ft., with annex 19x26 ft.

N. C., Winston-Salem.—S. H. Kress & Co., 250 Broadway, New York, and Leak-Cobb Co. let contract to erect store and lodge building. (See Stores.)

Tex., Beaumont.—Young Women's Christian Association, Mrs. F. I. Duff, Chrmn., let contract at \$48,000 to Woodruff & Chambers, Houston, to erect structure; 4 stories; 65x130 ft.; concrete, brick, stone, stucco and hollow tile; steam heat; swimming pool, shower baths, gymnasium, library, cafeteria, dormitory department, etc.; let plumbing and heating contract at \$7675 to Ed E. Eastham, Beaumont; A. T. Vic for electrical work at \$1740. (Lately noted.)

Tex., Kingsville.—A. F. & A. M. let contract to W. W. Marston, Kingsville, to erect Masonic Temple; cost \$25,000.

### BANK AND OFFICE

Okl., Pocomasset.—First National Bank of Pocomasset organized with \$25,000 capital; R. K. Wooten, Pres., Chickasha, Okla.; Jack Hill, V.-P., Pocomasset; let contract to erect bank building; completion in 90 days.

W. Va., Glen Jean.—McKell County and Kanawha, Glen Jean and Eastern Ry. let contract to A. Janutolo & Co. to erect office building; 1 story; 100x40 ft.; stone.

Va., Richmond.—Mrs. H. Block will expend \$14,000 to repair 2 brick stores.

## THEATERS

D. C., Washington.—Tom Moore, Prop. Moore's Strand Theater, 403 Ninth St. N. W., is having plans prepared by Blanke & Zink, Equitable Bldg., Baltimore, for New Strand Theater on Ninth St., near G St. N. W.; "L" shape, 70x100 ft. and 100x140 ft.; approximately 65 ft. high; fireproof construction; reinforced concrete and steel, slag roof; reinforced concrete floors; heating not decided; electric lights; cost about \$150,000. (Lately noted.)

## WAREHOUSES

Ga., Moultrie.—R. T. Persons and Dr. J. R. Hair will erect storage warehouse.

Ky., Lexington.—F. T. Justice & Co. will erect warehouse; brick; 40x150 ft.; stone foundation; 5-ply paper, pitch and gravel roof; cement floors; cost \$6000; Hendricks-Moore-Young Co., Archts.; contracts let separately.

Tex., Houston.—Dixie Cotton Warehouse Co. will erect \$3000 addition to building.

Tex., San Antonio.—Webster Company will erect 2 warehouses; cost \$6500.

## CHURCHES

Ark., Blevins.—Baptist Church let contract to Rev. W. T. King, Little Rock, to erect building.

Fla., Miami.—Trinity Episcopal Church, F. N. Rogers, Secy. of Vestry, let contract to W. A. Otter to complete interior of building; cost \$4940, exclusive of fixtures; will also erect guildhouse, 25x100 ft.; concrete construction; tile roof; total cost about \$20,000. (Lately noted.)

Ga., Ellerslie.—Bethesda Baptist Church let contract to Lovejoy Bros., Greenville, Ga., to erect building to replace burned structure; frame; brick foundation; cost \$3000; T. F. Lockwood & Co., Archts., Columbus, Ga. (Lately noted.)

Ga., Fort Valley.—M. E. Church South let contract to Rawlings & Geise, Dawson, Ga., to erect Sunday-school building and enlarge church; 5500 sq. ft. floor space; 3 stories; brick; slate roof; wood and tile floors; cost \$18,000; T. F. Lockwood, Archt., Columbus, Ga. (Lately noted.)

Ky., Lexington.—Broadway Christian Church let contract to Frank Corbin, Lexington, to erect building; 97x192 ft.; stone trimmings; slate roof; wood and concrete floors; cost \$100,000; steam heat, \$14,000; electric lights, \$3500; sidewalks, \$5000; Richards, McCarty & Bulford, Archts., Columbus, Ohio. (Lately noted.)

Tenn., Elkton.—Methodist Church let contract to Johnson, Chambers & Co., Athens, Ala., to erect building; 48x76 ft.; brick veneer; built-up Carey roof; wood floors; cost \$9000; warm-air heat, about \$350; J. Anderson Dickey, Archt. (Previously noted.)

Tex., Orange.—Luther Memorial Presbyterian Church let contract to J. E. Hogg, Orange, to erect chapel to seat 100. (Lately noted.)

Tex., Hallettsville.—Church of Christ, Scientist, has plans by and let contract to A. V. C. Moore, Hallettsville, to erect building; 31x64 ft.; Gonzales brick; sheet-iron roof; cement floor; cost \$3500. (Lately noted.)

W. Va., Charleston.—Union Mission Settlement, P. D. Withrew, Supt., let contract to Acme Construction Co., Charleston, to erect home and church; 3 stories and basement; brick and stone; 56x100 ft.; fireproof; tar and gravel roof; cement finish floors; low-pressure steam heat; cost \$45,000; J. L. Montgomery, Archt., 404 Clyde-Richardson Bldg., Charleston. (Previously noted.)

## CITY AND COUNTY

D. C., Washington.—Market, etc.—District Commrs., Room 500 District Bldg., Washington, let contract to erect fish market and appurtenant buildings on Water St. to Warren-Moore & Co., Commercial Trust Bldg., Philadelphia; cost \$115,544; Snowden Ashford, Municipal Archt., District Bldg., Washington. (Lately noted.)

## COURTHOUSES

Ga., Decatur.—De Kalb County Commrs. let contract to Geo. A. Clayton, Atlanta, to rebuild courthouse; fireproof; 62x150 ft.; granite exterior; tile roof with tin deck;

steam heat; electric lights; cost \$50,000; Walker & Chase, Architects, 1032 Candler Bldg., Atlanta. (Lately noted.)

Tenn., Jacksonville.—Campbell County let contract to Pauly Jail Building Co., St. Louis, to erect previously noted jail; 56x65 ft.; brick and concrete; gravel roof; concrete floors; cost \$12,750. Address Winston Baird, Chmn. County Commrs. (See Machinery Wanted—Heating.)

## DWELLINGS

Ala., Huntsville.—T. S. Davis let contract to Gifford & Whitaker, Girard, Ala., and Columbus, Ga., to erect dwelling; 1 story; frame; 8 rooms; composition shingle roof; tiled baths; cost \$7,000; T. F. Lockwood, Archt., Murrah Bldg., Columbus, Ga. (Previously noted.)

Ala., Montgomery.—G. L. Salter let contract to A. C. Gresson, 1121 Bell Bldg., Montgomery, to erect residence; 10 rooms; frame; brick-veneer front; asphalt composition shingle roof; rift pine and oak floors; hot-air heat; city lighting; cost \$10,000; Okel & Cooper, Archt., Montgomery. (Lately noted.)

D. C., Washington.—F. A. Holton, 2125 S. St. N. W., let contract on percentage basis to C. A. Langley, 310 Twelfth St. N. W., Washington, to erect dwelling at 2121 S. St. N. W.; 25x35 ft.; brick; limestone trimmings; slag and promenade tile roof; wood floors except baths and promenade duck top floor; dumb waiter; cost \$15,000; steam heat, \$1300; electric lights, exclusive of fixtures, \$300; Waddy B. Wood, Archt., 816 Connecticut Ave. N. W., Washington. Address contractor. (Lately noted.)

Fla., Jacksonville.—T. C. Hobbs, Magnolia Ave., has plans by and let contract to Henry Taylor & Son, 2825 Oak St., Jacksonville, to erect residence; 30x32 ft.; frame, brick veneer and stucco; cement tile roof; pine and oak floors; pipeless hot-air heat; city lighting; cost \$3000. Address contractors. (Lately noted.)

Fla., Seabreeze.—V. Newberger, 525 5th St., Brooklyn, N. Y., has plans by and let contract to Henry U. Whipple, Daytona, Fla., to erect lately noted residence; frame; wood shingle roof; wood floors; city electric lights; cost \$2500. (See Machinery Wanted—Water Supply; Pump.)

Ga., Vienna.—Mrs. A. L. Calhoun has plans by and let contract to P. G. Busbee, Vienna, to erect cottage-type bungalow to replace structure lately noted damaged by fire; wood; shingle roof; yellow pine floors; cost \$3000; construction begins about June 1. Address contractor. (See Machinery Wanted—Building Materials; Plumbing.)

La., New Orleans.—M. G. Gund, 927 Carrollton Ave., let contract to Philip K. Hirsch, 335 N. Front St., New Orleans, to erect 3 one-story double cottages at Iberville and White Sts.; wood; slate roof; wood floors; cost \$6000. Address Contr.

Md., Baltimore.—F. Webster Cook let contract to Jerome L. Love, 2628 Harford Ave., Baltimore, to erect six 2-story brick dwellings on west side Greenmount Ave., near Butte Pl.; 24x40 ft.; ornamental brick; cost about \$18,000.

Mo., Kennett.—O. E. Campbell let contract to Bragg & McKay, Kennett, to erect boarding-house at Silver City.

N. C., Wilmington.—Herbert S. Bluthenthal let contract to L. H. Volders, Wilmington, to erect \$15,000 residence.

N. C., Winston-Salem.—Dr. W. M. Johnson let contract to Paul Linville, Winston-Salem, to erect dwelling; cost \$3000.

N. C., Winston-Salem.—G. A. Warlick will erect 3 dwellings on 53d St.; cost \$3000; J. H. Grubbs, Contr., Winston-Salem.

N. C., Winston-Salem.—Alex. Daye let contract to Fogle Bros. Co., Winston-Salem, to erect dwelling; cost \$4000; shingle roof; W. C. Northup, Archt., Winston-Salem.

S. C., Greenwood.—E. W. Stalnaker let contract to C. C. Stalnaker, Greenwood, to erect 7-room bungalow; Summer & Hemphill, Archts., Greenwood.

Tex., Dallas.—Jack Beall let contract to W. A. Thomas, Southwest Life Bldg., Dallas, to erect dwelling at 3725 Turtle Creek Blvd.; 60x50 ft.; hollow tile; tile roof; hardwood floors; electric lights; cost \$16,000; hot-air heat, \$650; H. B. Thomson, Archt., Southwest Life Bldg., Dallas.

Tex., Dallas.—B. S. Roberts, Terrell, Tex., let contract to J. B. Morris & Son, Dallas, to erect residence; 48x60 ft.; brick, stone and frame; tile roof; oak and tile floors; hot-air heat; city electric lights; C. W. Bulger & Son, Archts., Dallas. (Lately noted at Tex., Terrell.)

Tex., Fort Worth.—Dr. A. R. King let contract to erect 2-story residence.

Va., Norfolk.—Mrs. D'Anna let contract to Whitehurst & Bessley, Norfolk, to erect 2-story frame residence; cost \$3000.

## GOVERNMENT AND STATE

Md., Indian Head.—Powder Dry Houses.—Bureau of Yards and Docks, Navy Dept., F. R. Harris, Chief, Washington, D. C., let contract at \$27,000 to John H. Nolan Construction Co., Munsey Bldg., Washington, to erect 3 frame buildings at Naval Proving grounds on concrete or brick walls and piers, with sides and roofs covered with corrugated galvanized sheet steel. (Lately noted.)

Tex., Austin.—Land Office.—Walsh & Burney, San Antonio, general contractors to erect land office building, let following sub-contracts: Reinforcing steel, structural, miscellaneous and ornamental iron, Alamo Iron Works; brass goods, W. E. Huffaker; cement, San Antonio Portland Cement Co.; hollow tile, Star-Clay Products Co.; glass, Texas Glass & Paint Co.; underwriters windows, T. P. Walsh; electric wiring, Wright Bros.; all of San Antonio; sheet metal work, Max Arlt; plumbing, Donnelly & White; face brick and fire brick, Elgin-Butler Brick & Tile Co.; cut stone work, A. L. Gooch; painting, T. S. Hill; heating, ventilation and refrigeration, Jno. L. Martin; lumber, Nalle & Co.; all of Austin; marble work, J. Desco & Son; roofing, Texas Roofing & Insulating Co.; both of Dallas; elevator, Otis Elevator Co.; ash-hoisting equipment, Gillis & Geochagan; both of New York; mail chute, Cutler Mail Chute Co., Rochester, N. Y.; tile and terrazzo, Central Mosaic & Tile Co., Memphis, Tenn.; water-proofing materials, W. L. Macatee & Sons, Houston, Tex.; tiling and plastering, Southwestern Plastering Co., Fort Worth; hollow metal trim, doors and sash, Solar Metal Products Co., Columbus, Ohio; plans by Atlee B. Ayres, San Antonio, call for 4-story-and-basement structure; 120x120 ft.; fireproof; gravel roof; tile and marble floors; cost \$230,700. (Previously noted.)

Va., Fort Monroe.—Officer's Quarters.—Government let contract to R. V. Richardson, Hampton, to erect quarters for quarantine officer; cost \$10,000; also let contract to Mr. Richardson to repair several casements; cost \$4000.

Va., Portsmouth.—Hospital.—United States Navy Dept. let contract to erect 6 buildings for contagious wards at Norfolk Naval Hospital. (See Hospitals.)

Va., St. Juliens Creek.—Storehouse.—Bureau of Yards and Docks, Navy Dept., F. R. Harris, Chief, Washington, let contract to Penn Bridge Co., Beaver Falls, Pa., to erect storehouse for ammunition; 54x90 ft.; steel frame; corrugated steel siding on wood frame; wood sheathed roof covered with 4-ply asbestos roofing; galvanized iron cornice and ventilators; cost \$15,730. (Lately noted.)

## HOSPITALS, SANITARIUMS, ETC.

Ga., Atlanta.—St. Joseph's Infirmary let contract to Miles & Bradt Co., Austell Bldg., Atlanta, to remodel building for nurses' dormitory; 43x110 ft.; brick walls; wood floor construction; slate and tin roof; electric lights; cost \$18,000; steam heat, \$2700.

Tenn., Knoxville.—Drs. V. D. Holloway, Herbert Acuff, J. H. Kincaid and others acquired Riverside Apartments and are reported to expend several thousand dollars to convert into sanitarium to be known as Riverside Hospital; 40 rooms; contract let.

Tex., Ballinger.—Drs. Halley and Love let contract to H. H. Meyers, San Angelo, Tex., to erect lately noted additional story to sanitarium; stone and brick; tar and gravel flat roof; asbestos floor construction; city electric lights; cost \$20,000; heating and plumbing, \$3500; push button electric elevator, \$2355; Arthur Swartz, Archt., San Angelo. (See Machinery Wanted—Electric-light Plant.)

Va., Burkeville.—State Board of Health let contract to R. H. Stewart & Son, South Boston, Va., to erect tuberculosis building for colored patients at Piedmont Sanatorium, Dr. B. L. Tallafiero, Supt.; plans by C. M. Robinson, Inc., Richmond, call for brick service building 40x70 ft.; frame pavilion 20x24 ft.; tin roof on brick building, asphalt shingle on frame structure; brick and frame floor construction; dumbwaiter; cost \$26,000. (Lately noted.)

Va., Portsmouth.—United States Navy Department let contract to Newport Contracting & Engineering Co., Newport News, Va., to erect 6 buildings for contagious wards at

Norfolk Naval Hospital; 72x35 ft.; 1 story; wood frame; slate and copper roof; wood floors; cost \$38,000; water heating, for yard heating plant, \$800; electric lights, \$200; plans by F. R. Harris, Chief, Bureau Yards and Docks, Washington, D. C. Address contractor. (See Machinery Wanted—Building Materials; Flooring.)

## HOTELS

D. C., Washington.—Nelson & Lewin, 20 N. La Salle St., Chicago and Washington, general contractors to erect building for National Capitol Hotel Co., let following sub-contracts: Excavation, Allen Construction Co.; heating, Biggs Heating Co.; electric work, H. P. Foley Co.; concrete work, National Fireproofing Co.; roofing, Warren-Ehret Co.; sheet metal work, J. D. Thompson Co.; all of Washington; plumbing, G. A. Nilson; ventilation, Cuthbert Schaefer; both of Chicago; ornamental iron, Hecla Iron Works; millwork, James Elgar, Inc.; both of New York; refrigerating, Pennsylvania Engineering Co., Philadelphia; plans by Carrere & Hastings, 45th St. and Vanderbilt Ave., New York, call for reinforced concrete construction; 10 stories, basement, sub-basement and roof garden; tile roof; concrete floors; vapor heat; electric elevators; cost \$1,000,000. (Previously noted.)

Mo., Kennett.—Martin Miener let contract to Bragg & McKay, Kennett, to erect hotel at Silver City; brick; furnace heat; cost \$20,000 to \$25,000.

## MISCELLANEOUS

Ala., Montgomery.—Clubrooms.—N. J. Bell estate let contract to erect building for clubrooms and stores. (See Stores.)

Ga., Atlanta.—Exhibit Building.—South-eastern Fair Assn. let contract to R. M. Walker, Atlanta, to erect exhibit building on fair grounds at Lakewood; 100x200 ft.; 2 stories; fireproof; cost \$50,000; Edwards & Sayward, Archts., 633 Candler Bldg., Atlanta. (Lately noted.)

Ga., Atlanta.—Restaurant.—Eli Chotas & Co. let contract to C. B. Myer Constructing Co., 813 Empire Bldg., Atlanta, to remodel and erect addition to building on Marietta St. for restaurant; 36x60 ft.; brick, tile and plaster; tile floors; city lighting; cost \$3500; Hentz, Reid & Adler, Archts., Atlanta. Address contractor. (Lately noted under Stores.)

Miss., Corinth.—Stable.—R. F. Liddon let contract to W. B. McCord, Corinth, to erect livery stable; 39x100 ft.; brick; composition roof; concrete floors; cost \$4000. (Lately noted.)

S. C., Lancaster.—Clubhouse.—Lancaster Mills let contract to erect clubhouse; auditorium to seat 500 people; cost about \$30,000.

## SCHOOLS

Ala., Opelika.—City, J. G. Palmer, Mayor, let contract to W. J. Padgett, Opelika, to erect high school; plans by Frank Lockwood, Montgomery, Ala., call for 3 stories; brick and stone; flat sand and gravel roof; wood and cement floors; cost about \$33,000, exclusive of heating. (Lately noted.)

Ga., Doerun.—School Board let contract to Smith & Watson, Albany, Ga., to erect school; brick; 2 stories; 90x60 ft.; cost \$15,000; C. C. Huber, Archt., Moultrie, Ga. (Lately noted.)

Ky., Ashland.—Board of Education let following contracts for erection of \$100,000 high school: General contract, Sanders Construction Co.; plumbing, Union Plumbing Co., both of Ashland; electric work, McKeever Electric Co.; heating and ventilating, Columbus Heating & Ventilating Co., both of Columbus, O.; structural steel and ornamental iron work, James J. Weiler, Huntington, W. Va.; Frank L. Packard, Archt., Columbus, O. (Lately noted.)

Miss., Starkville.—Trustees of Agricultural & Mechanical College, W. H. Smith, Pres., let contract at \$41,528 to Dabbs & Wetmore, Meridian, Miss., to erect addition to dormitory; 163x145 ft.; brick and mill construction; slate roof; wood and concrete floors; steam heat; electric lights; cost \$40,000; Xavier A. Kramer, Archt., Magnolia, Miss. (Previously noted.)

Okla., Edmond.—Board of Education let contract to Marshall & Bethel, Guthrie, Okla., to erect high school; 40x50 ft.; brick and frame; Barrett 20-year guarantee roof; wood floors; gas heat; electric lights; cost \$16,200; Leonard H. Bailey and Virgil D. Alden, Archts., Oklahoma City. (Previously noted.)

S. C., Anderson.—Anderson College let contract to Townsend Lumber Co., Anderson,

to erect 2 additions to dormitories; 2 stories and basement; 46x102 ft.; brick and brick veneer; slate roof; Warren Webster heating system; electric lights; also let heating contract to Anderson Hardware Co., and plumbing contract to Sullivan Hardware Co.; both of Anderson; cost \$35,000; Casey & Fant, Archts., Anderson. (Lately noted.)

S. C., Cedar Spring.—South Carolina School for Deaf and Blind, N. F. Walker, Supt., let contract to E. L. Stallings, Cedar Spring, for plumbing at administration building, and contract for wiring to Brill Electric Co., Spartanburg; also let contract to J. A. Kalb, Atlanta, to remodel east wing of main building; cost \$17,000; Edwards & Sayward, Archts., 533 Candler Bldg., Atlanta. (Lately noted.)

Tex., Bardwell.—School Board let contract at \$20,540 to J. H. Dalton, Cleburne, Tex., to erect school; 2 stories and sub-story; brick and concrete; C. H. Leinbach, Archt., Dallas. (Previously noted.)

Tex., Fort Worth.—Trustees let contract to Bryce Building Co., Fort Worth, to erect east wing and center of high school; 70x300 ft.; 3 stories and basement; reinforced concrete steel floor domes; reinforced concrete and brick; stone trim; gravel and tile roof; tile floors; cost \$200,000; let contract to Montrie & Manchester for low-pressure steam heat, about \$18,000; McDonald-Blevins Co., plumbing; Miller Electric Co., wiring, about \$3000; all contractors of Fort Worth. Sanguinet & Staats, Archts., Fort Worth. (Lately noted.)

Tex., Houston.—Harris County Commrs. let following contracts to erect fireproof building for Harris County School for Girls at Bellaire to accommodate 50 students: Andrew Ness, general contract at \$28,650; Warren Co., Houston; plumbing, \$1956; Dixie Heating & Ventilating Co., Houston, heating, \$2196; A. T. Vick Co., wiring, \$988; Finger & Bailey, Archts., Houston. (Lately noted.)

Va., Claremont.—Claremont School Dist. has plans by and let contract to R. H. Reidel, Holland, Va., to erect school; 2 stories; 64x64 ft.; brick and concrete; metal shingle and tin roof; wood floors; cost \$15,000; hot-air heat, \$3000; construction begins in about 30 days. (Lately noted.)

W. Va., Berkeley Springs.—Board of Education let contract to W. H. Young at \$27,760 to erect high school; plans by A. J. Klinehart, Hagerstown, Md., call for brick; flat roof; maple floors; concrete basement floor; hot-air heat; fan ventilating system; electric lights; concrete sidewalks; cost \$20,000. (Lately noted.)

W. Va., Northfork.—Board of Education, A. D. Rice, Pres., Worth, W. Va., let contract at \$30,500 to Barnett & Nash, Graham, Va., to erect addition to high school; 90x90 ft.; 2 stories; 6 classrooms; 23x30 ft.; auditorium to seat 300; brick walls; interior wood framing; metal roof; steam heat; electric lights; cost \$20,000; also 4-room frame addition to 2 school buildings; all of Northfork; A. B. Mahood, Archt., Bluefield, W. Va. (Previously noted.)

## STORES

Ala., Gadsden.—E. E. Thompson, Anniston, Ala., let contract to W. H. Mayben, Gadsden, to improve building occupied by Ike Saks Clothing Co.; connect with adjoining structure, remove partitions, provide show windows, etc.; A. D. Simpson, Archt., Gadsden; completion by August 1.

Ala., Montgomery.—N. J. Bell estate let contract to H. J. Parrish, Montgomery, to erect building; lower floor stores; upper floor clubrooms; 54x90 ft.; standard construction; built-up roof; wood floors; cost \$15,000; gas radiation heat, \$700; electric lights, \$150; Fredk. Ausfeld, Archt., Bell Bldg., Montgomery. (Lately noted.)

D. C., Washington.—I. O. O. F. let contract to erect store and lodge building. (See Association and Fraternal.)

Fla., St. Petersburg.—H. Walter Fuller let contract to erect store and apartment building. (See Apartment-Houses.)

Ga., Atlanta.—James R. Wyllie Co. let contract to Fulton County Home Builders, Atlanta, to erect 3-story-and-basement building at 266 Peachtree St.; 101x150 ft.; brick; cost \$65,000; Thomas M. Walker, Archt., Atlanta.

Ga., Augusta.—R. R. Tillman, Trenton, S. C., let contract to Henry M. Morrison, Augusta, to repair burned structure; 3 stories; brick; cost \$5000.

Ga., Gainesville.—E. E. Kimbrough and Rudolph Bros. let contract to John A. Pierce, Gainesville, to erect 2 stores; 22.5x164 ft. each; brick; metal roof; wood floors; hand elevator. (Lately noted.)



N. C., Charlotte.—Leroy Springs let contract to J. A. Gardner, Charlotte, to erect 3-story business building.

N. C., Winston-Salem.—Chatham & Eller let contract to Fogle Bros. Co., Winston-Salem, to repair store building on Liberty St.; cost \$3000.

N. C., Winston-Salem.—S. H. Kress & Co., 350 Broadway, New York, and Leak-Cobb Co. let contract to J. L. Crouse, Greensboro, N. C., to erect 2 store buildings at 4th and Main Sts., to cost about \$80,000, exclusive of plumbing, heating, lighting, etc.; plans by Northrup & O'Brien, Winston-Salem, for Leak-Cobb Co.'s building, call for 3 stories; 29x200 ft.; reinforced concrete; fireproof; 2 stores on 4th St. and 9 on Main St.; stores on Main St. to be occupied by S. H. Kress & Co.; 3d floor to be used by Eagles Club; plans by Seymour Burrell, 350 Broadway, New York, call for 2 stories and basement; 43x200 ft.; brick or reinforced concrete. (Previously noted.)

Tex., Waco.—H. E. Gross, Waco, has contract to remodel and erect addition to building for Cooper Grocery Co.; cost \$40,000; Milton W. Scott & Co., Architects, Waco. (J. R. Milam lately noted to receive bids for this work.)

### THEATERS

Mo., St. Louis.—Melba Amusement Co., Dr. O. T. Upshur, Prest., Farmers & Merchants' Trust Bldg., let contract to erect vaudeville and moving-picture theater; 16-ft. corridor; 73x150 ft.; reinforced concrete; forced ventilation and cooling devices; ground floor to seat 1450; cost \$50,000; Maritz, Henderson & Tuchschnidt, Architects, New Bank of Commerce Bldg., St. Louis, will supervise construction.

### WAREHOUSES

Ala., Alabama City.—Dwight Manufacturing Co. let contract to W. T. Christopher

Construction Co., Gadsden, Ala., to erect 2 warehouses; 50x132 ft.; 4 stories; also building for picker-room; 80x171 ft.; 3 stories and basement.

Fla., Tampa.—E. E. Freeman let contract to Bates-Hudnall-Jetton Co., Tampa, to erect warehouse; 1 story; 85x170 ft.; Barrett specification roof; concrete floors; cost \$14,000; electric lights, \$400; Paul Gasser, Archt., Tampa. (Lately noted.)

Ga., Douglas.—Georgia Tobacco Warehouse Co. has plans by and let contract to R. N. McEachern, Douglas, to erect tobacco sales warehouse; 70x120 ft.; 1 story; frame; 3-ply Barrett composition roof; heavy board floors; cost \$3500. (Previously noted.)

Ga., Edison.—Edison Oil Co. let contract to W. S. Beauchamp to erect warehouse for peanut storage; 80x175 ft.; frame; iron roof; frame floors; cost \$5000; will replace structure lately noted damaged by fire.

Okl., Tulsa.—Nichols Transfer & Storage Co. has plans by and let contract to Fidelity Building Co. for storage building; 80x140 ft.; fireproof; reinforced concrete; cement floors; Otis elevator; cost \$40,000. (Lately noted.)

Tenn., Chattanooga.—Mark H. Senter has plans by Crutchfield & Hamilton, Chattanooga, and let contract to A. W. Duncan, 504 Duncan Ave., Chattanooga, to erect warehouse and garage for Southeastern Oil Co.; 54x84 ft.; brick; Suoco composition roof; wood floors; cost \$5000. (Lately noted.)

Tenn., Chattanooga.—Southwestern Oil Co. let contract to A. W. Duncan, Chattanooga, to erect \$5500 warehouse.

Va., Petersburg.—F. F. Thweatt let contract to Harrison Construction Co., Petersburg, to erect proposed warehouse; brick; 50x125 ft.; cost \$20,000 to \$30,000.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Acid (Sulphuric) Plant.—P. C. Putt, Prest. Municipal Committee, Jubbulpore, Central Provinces, India.—Complete information, including machinery prices, on contract process sulphuric acid plant.

Automobiles, etc.—R. Pequeno, Apartado Correos, Barcelona, Spain.—To represent manufacturers of rebuilt typewriters; bicycle accessories; motor cars and supplies.

Bank Fixtures and Furniture.—Citizens' National Bank, Abilene, Tex.—Bids until June 1 on fixtures and furniture for two-story bank and office building; plans and specifications completed by David S. Castle, Archt., Abilene, May 18.

Bags (Cloth or Paper).—Jos. L. Pearson, Keyville, Va.—To correspond with manufacturers of 12, 24, 48 and 96-lb. cloth or paper bags.

Barrel Machinery.—J. E. Hellams, 217 S. 7th St., Muskogee, Okla.—Slack barrel stave and heading machinery; second-hand preferred.

Blower (Pressure).—Salem Iron Works, 206 Liberty St., Winston-Salem, N. C.—Good second-hand pressure blower for 42-in. Newton cupola; prices and specifications with full particulars regarding condition.

Boilers.—See Mining Machinery (Coal).—Citizens Coal & Mining Co.

Boilers.—John F. Riley Foundry & Machine Works, Charleston, S. C.—40 H. P. James Beggs direct-return boiler or 40 H. P. Erie City Economy boiler; state price and time of delivery.

Brickwork.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on furnishing and building brickwork, building No. 3, schedule 1104, Charleston, S. C.

Bridge (Concrete) Construction.—Claborn County Supvrs., L. B. Allen, Prest., Port Gibson, Miss.—Plans for small reinforced concrete arch bridges, 50 to 100-ft. span; contract to be let June 4.

Bridge Construction.—See Road and Bridge Construction, State Highway Comm., Richmond.

Bridge Construction.—Carroll County Commrs., Hillsville, Va.—Bids until May 16 to construct steel bridge 51 ft. long over Lovell's Creek near Spears Mill; plans and specifications on file at Clerk's office, Hillsville, and with State Highway Commission; G. P. Coleman, State Highway Commr., Richmond.

Building Materials.—Whitesburg Coal Co., J. Henry Hall, Mgr., Whitesburg, Ky.—

Prices on building materials, including yellow pine, boxing framing, flooring, ceiling, siding, etc.

Building Materials.—P. G. Busbee, Vienna, Ga.—Prices on building materials for \$3000 bungalow.

Building Materials.—D. G. Ziegler, St. Matthews, S. C.—Prices on building materials for \$140,000 apartment-house.

Building Materials.—C. A. Gause, Tarpon Springs, Fla.—Prices on track door hangers; short and medium I beams or angle irons; skylight glass in 2x3-ft. lengths and 4-ft. lengths; polished plate glass.

Building Materials.—Newport Contracting & Engineering Co., Newport News, Va.—Prices on framing lumber, flooring, siding, ceiling, door and window frame, trim, doors and sash, exterior trim for six hospital wards at Norfolk Naval Hospital.

Bucket (Dredge).—Standard Products Co., 1206 Fisher Bldg., Chicago, Ill.—Second-hand class E 3/4-yd. clam shell bucket.

Canning Equipment.—Henderson Chamber of Commerce, C. W. Roberts, Mgr., Henderson, N. C.—Data and prices on canning equipment; also on machinery to manufacture cans.

Canning Machinery.—Warren Edwards, Milledgeville, Ga.—Data and prices on equipment for canning factory.

Cans (Paint).—Thos. E. Matson, Box 215, Johnson City, Tenn.—Correspondence with manufacturers of paint buckets or similar cans.

Cars.—C. L. Ritter Lumber Co., Huntington, W. Va.—42-in. gauge log and flat cars.

Cars.—Curtis & Shumway, Inc., general contractors, Lynchburg, Va.—Four 36-in. gauge dump cars; 1 or 2-yd. capacity; price f. o. b. Lynchburg.

Cars (Mine).—Hess Coal & Coke Co., Morgantown, W. Va.—Prices on mine cars. (See Rails, etc.)

Cars (Coal Mine).—R. L. Pope, Williamsburg, Ky.—30 to 50 36-in. gauge coal cars of 1-ton capacity; good second-hand.

Cartons.—I. S. Papps, Tarpon Springs, Fla.—Names and addresses of manufacturers of 1-lb. cartons for coffee and tea.

Cement.—See Road Machinery, etc.—C. L. Cureton.

Cement.—U. S. Engr. Office, Montgomery, Ala.—Bids until June 16 to furnish and deliver about 14,000 barrels American Portland cement; information on application.

Cement Plant.—P. C. Putt, Prest. Municipal Committee, Jubbulpore, Central Prov-

inces, India.—Complete information, including machinery prices, on equipment for annual production 30,000 tons Portland cement; gas engines, turbines, dynamos, gas purifiers and rotators, rotary furnaces and grinders.

Club Fixtures.—H. B. Webster, 1610 Southwest Life Bldg., Dallas, Tex.—Prices on club fixtures for \$20,000 clubhouse.

Coal.—Elliott Woods, Supt. U. S. Capitol Building and Grounds, Washington, D. C.—Bids in duplicate until June 2 for 25,000 tons, more or less, bituminous coal for fiscal year ending June 30, 1918; bidders to specify names of coal and location of mines; coal to be delivered on siding Capitol power plant, Garfield Park, Washington, as designated.

Chemicals, etc.—Punjab National Trading Co., 191 Hornby Rd., Manekbal Bldg., Bombay, India.—Aniline dyes and chemicals, sizing and soap chemicals, colored and white, writing and printing papers, stationery, bookbinding cloth and tracing cloth, tanned leathers, etc.

Crane (Locomotive).—Henry Walke Co., E. M. Hall, Sales Mgr., Norfolk, Va.—Standard gauge, single or double track, 10 to 15-ton locomotive crane, with 35 to 50-ft. boom, and equipped for bucket work; condition guaranteed. Wire make, location and all details.

Crusher (Rock, Jaw).—Pontotoc County, Fourth Dist. Highway Commission (O. J. Knox, Chmn.), Pontotoc, Miss.—To receive bids June 4 for portable jaw rock crusher, maximum capacity 15 tons per hour, equipped with 20-ft. folding elevator, 15-ton portable bin, 30-in. by 7-ft. screen and 15-30 oil-pull tractor; new or second-hand.

Drainage.—Commrs. Bayou Meto Drainage Dist. No. 1, Louke County, Louke, Ark.—Bids received June 14 at office of Chapline & Beard, Attys., for excavation and clearing, system of mains and laterals; 2,046,850 cu. yds. dredge ditch, 51,700 cu. yds. team ditch and 850 acres clearing; plans and specifications at office of attorneys.

Dredging.—U. S. Engr. Office, Baltimore, Md.—Bids until May 14 to dredge Claiborne harbor and Tyaskin Creek, Md.; information on application.

Drill Press.—M. B. Parker, 1912 Oak St., Chattanooga, Tenn.—New or second-hand, 14 first-class condition, 24-in. back-gear drill press; want full description and lowest dealer's price.

Drilling Machinery.—Herring & Schellhaus, Forrest City, Ark.—Prices on hand auger or drill for investigating gravel pits and bridge sites.

Electric Wiring Material, etc.—Odessa Light & Power Co., J. E. Garrett, Secy.-Treas., Odessa, Tex.—Prices (for file) on material for wiring buildings; also on oil engine.

Electric-light Plant.—Drs. Halley and Love, Ballinger, Tex.—Prices on individual electric-light plant.

Electrical Equipment.—Adairville Lighting Co., R. E. Brian, Prest., Adairville, Ky.—Prices on water turbine, 6-ft. head, about 100 H. P., with 2300-volt, 3-phase, 60-cycle belted type generator, and exciter and switchboard; Nos. 9-10 D. B. W. P. iron and Nos. 6-8 D. B. W. P. copper wire; three 5 and 10 K. W. transformers; two 4 and 6-pin crossarms, with accessories, lightning arresters, breaker arms, bracket-type street-light fixtures for series incandescent system, and 25-ft. to 45-ft. class B chestnut poles.

Electrical Machinery.—P. C. Putt, Prest. Municipal Committee, Jubbulpore, Central Provinces, India.—Complete information, including machinery prices, on 500 to 1000 H. P. plant to furnish electricity for lighting and power; natural gas as a source of power for lighting and for generating electricity.

Engines (Gas).—See Mining Machinery (Coal).—Mid-State Coal & Mining Co.

Engine (Oil).—See Electric Wiring Material, etc.—Odessa Light & Power Co.

Engines (Traction).—See Road Machinery, etc.—C. L. Cureton.

Engines.—See Mining Machinery (Coal).—Citizens Coal & Mining Co.

Engineer (Road).—Laurens County Highway Com., H. B. Humbert, Supvr., Laurens, S. C.—Correspondence, view to selecting engineer at meeting, May 24, for 200 mi. road construction; engineer with experience on top-soil or gravel roads preferred; personal interview requested.

Evaporating (Vegetable) Plant.—Rio Grande Farm Products Co., Alex. H. Fairchild, Mgr., Pharr, Tex.—Data on estab-

lishment of vegetable evaporating plants, including kinds of vegetables evaporated, processes, packing for shipment, sales, etc., with prices on equipment.

Fire Equipment.—A. S. E., auto and truck dealers, care Manufacturers Record, Baltimore, Md.—Prices on one unit (horizontal) of two chemical tanks of 40 gals. each and one unit of two tanks, 60 gals. each; for fire truck equipment; give prices on both units with and without rotary pumps for 1-in. hose and 1 1/2-in. hose, and state horsepower necessary for driving pump; estimates also desired for this equipment already mounted on body for 2-ton truck, body to have carrying capacity of 6 men and the driver.

Flour Mill.—W. A. Murray, Mebane, N. C. Machinery for daily capacity 50 bbls. flour.

Flooring.—See Building Materials.—Newport Contracting & Engineering Co.

Forms (Steel; Curb and Gutter).—Mills & Howell, Irvine, Ky. or Frankford, Ky.—Prices on steel curb and gutter forms.

Framing.—Chas. B. Hall, St. Petersburg, Fla.—50 carloads framing.

Generator (Electric).—J. S. Young Co., 2301 Boston St., Baltimore, Md.—Prices on 50 K. W. D. C. 440-volt 3-wire-system generator.

Glass (Plate).—See Building Materials.—C. A. Gause.

Gymnasium Equipment.—Simmons College, Abilene, Tex.—Bids about June 15 on gymnasium equipment for \$20,000 building.

Hardware.—See Metal Parts (Cot).—White Furniture Co.

Heating.—Winston Baird, Chmn. County Commrs., Jacksboro, Tenn.—Prices on heating equipment for \$12,750 jail.

Heating and Plumbing.—Duval County Board of Public Instruction, F. A. Hathaway, County Supt. of Public Instruction, Jacksonville, Fla.—Bids until June 3 for plumbing and heating (separate or combined) for School No. 100, Long Branch, No. 135 Mason Park; plans from Mark & Sheftall, Architects, Jacksonville.

Knitting Machinery.—R. G. Lockwood, Buchanan, Va.—Names and addresses of dealers in hand-power knitting machines.

Lathe (Automatic).—D. F. C. Harry, Grover, N. C.—Small automatic lathe, for skewers and other small turning.

Leather.—Leder Magazijn, Oelkian Tjiang, Pasar Besar 99, Soerabala, Java.—Finished leather such as box calf, glace enameled leather, drill, etc.

Lighting Fixtures.—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—To open bids May 24 to furnish and install lighting fixtures in U. S. postoffices at Alliance, Neb.; Elkins, W. Va.; Huntington, Ind.; Kallispell, Mont.; Newark, O.; Orlando, Fla.; Pottstown, Pa.; Roseburg, Ore.; Rumford, Me.; S. Bethlehem, Pa.; S. Boston, Va.; and Vancouver, Wash.; copies of drawings and specifications obtainable.

Lime, etc.—G. Canepa & Cia, 2 Via S. Giorgio, Genoa, Italy.—To represent manufacturers of exporters of caustic soda, carbonate of soda, chloride of lime, resin, etc.

Loader (Wagon).—Charlottesville Sand & Gravel Corp., Charlottesville, Va.—Addresses of manufacturers of drag line wagon loaders.

Lockers.—H. B. Webster, 1610 Southwest Life Bldg., Dallas, Tex.—Prices on lockers for \$20,000 clubhouse.

Locomotive, etc.—Tar River Brick Co., Rocky Mount, N. C.—Locomotive of 30-in. gauge, weight 3 tons, used or rebuilt, or second-hand hoisting engine, D. D. and D. S. about 6x10.

Locomotive.—Curtis & Shumway, Inc., general contractors, Lynchburg, Va.—36-in. gauge Bell or Plymouth locomotive; price f. o. b. Lynchburg.

Lumber.—(Yellow Pine).—See Building Materials.—Whitesburg Coal Co.

Machines and Tools.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish motor-driven 21-in. upright drill, motor-driven 12-in. double grinder, 16-in. back-gear screw-cutting engine lathe, and tool-room crank shaper, schedule 1108, delivery Philadelphia; 4 cold metal-sawing machines, schedule 1109, delivery Norfolk; 2 machines for spacing light angles up to 49 ft. long to a gauge or strip, schedule 1107, delivery Norfolk and Philadelphia; dehydrating press, schedule 1102, delivery Washington.

Machinery.—Giovanni Albertini, 10, Via Carducci, Milano, Italy.—To represent manufacturers of machinery and raw materials.

**Manufactures.**—John G. Murdoch & Co., 91 and 93 Farrington Rd., London, E. C. England.—To represent manufacturers of various classes of American products.

**Manufactures.**—G. D. Katsikis, 60 Rue Puvis-de-Chavannes, Marseilles, France.—To represent American manufacturers of all kinds of products; wants to establish at Marseilles branch with large hall for exhibition of samples and catalogues or advertising names of manufacturers; send catalogues to various customers and to commercial associations in such way that manufacturers and their goods would become known without outlay.

**Metal Parts (Cot).**—White Furniture Co., Mebane, N. C.—Data and prices on metal parts for cots for U. S. Army.

**Metalworking Machinery.**—Henderson Chamber of Commerce, C. W. Roberts, Mgr., Henderson, N. C.—Data and prices on machinery for manufacturing cans.

**Mills (Grinding and Crushing).**—See Mining Machinery.—"Mill."

**Mining (Coal) Machinery and Equipment.**—Bear Creek Coal Corp., G. D. Kilgore, Pres.-Mgr., Tacoma, Va.—Prices on hoist; one 40 and one 10 H. P. motors; 3x3½ pump (piston); 1000 ft. fine wire rope; 25 tons 25-lb. steel rail.

**Mining Machinery (Coal).**—Mid-State Coal & Mining Co., Geo. L. Brown, Pres., 1407 Market St., St. Louis, Mo.—Prices on gas engines, hoisting, pumps, coal-cutting machinery, shaker screens, tippie scales and wagon scales.

**Mining and Crushing (Limestone) Machinery.**—H. D. Terrell Land Co., C. D. Terrell, Gen. Mgr., Americus, Ga.—Prices on steam power plant for about 100 H. P. (include boiler, engine, pumps, etc.) 100-ton pulverizer; 2 crushers for reducing stone from quarry size to size for pulverizer; dryer, capacity 100 tons daily; conveying and elevating equipment; transmission equipment.

**Mining Machinery (Coal).**—Citizens' Coal & Mining Co., H. E. Courson, Secy., Dewar, Okla.—Prices on boilers, engines, pumps, cables, pit cars and other equipment for coal mine, 100-ft. shaft, daily capacity 400 to 500 tons.

**Mining Machinery.**—"Mill." Box 374, Salisbury, N. C.—Prices on second-hand 6 or 8-ft. Hardinge mill and cypress tank, 22 ft. in diam.; also smaller machines for installation of 100-ton flotation unit.

**Motor (Electric).**—See Woodworking Machinery.—Williams Lumber Co.

**Motors (Electric).**—Battley Machinery Co., Rome, Ga.—Good second-hand 50 and 75 H. P. 3-phase 60-cycle 220-550 and 220-volt motors.

**Motors (Electric).**—McNamee Kaolin Co., Robt. Spencer Finney, Pres., Bath, S. C. (New York office, Cumberland Bldg., Broadway and 54th St.).—Prices on electric motors. (See Pulverizers, etc.)

**Oil (Peanut) Machinery.**—M. E. Compton, 404 First National Bank Bldg., Montgomery, Ala.—To correspond with manufacturers of peanut oil machinery.

**Oils, Greases, etc.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish following oils, greases, lubricants, etc., for various deliveries: Paste form, cutting compound, soluble cutting oil, mineral, hard oil, schedule 1100; graphite grease and lubricating mineral grease, schedule 1099; 150,000 gals. kerosene mineral oil, schedule 1095; petroleum spirits, schedule 1096.

**Paper Box Machinery.**—Standard Printing Co., 306 Harrison St., Tampa, Fla.—Data and prices on machinery and material for manufacturing paper boxes.

**Paving.**—Office of State Highway Com., G. P. Coleman, State Highway Commr., Richmond, Va.—Bids at Clerk's office, Tazewell, Va., until May 19 to pave streets with bituminous macadam or concrete; 15,000 sq. yds.; plans and specifications on file with Clerk, Tazewell, or with State Highway Commission.

**Paving.**—Comms. Paving Dist. No. 2, W. L. Howell, Secy., Russellville, Ark.—Bids until May 30 to construct 5380 sq. yds. concrete, asphalt macadam or tarvia paving; plans and specifications on file with J. T. Bullock, Atty., and Towl Engineering Co.

**Paving.**—City of Fort Worth, Tex., H. A. Lawrence, City Secy.—Bids until May 22 to pave Allen Ave. viaduct; 2156 sq. yds.; bituminous, asphaltic concrete, vertical fiber

brick; proposal forms and specifications on file with F. J. Von Zuben, City Engr.

**Paving.**—City of Enterprise, Ala.—Bids soon on 14,000 sq. yds. street paving; also probably large amount cement sidewalks; Arthur Pew, Engr., 500 Forsyth Theater Bldg., Atlanta, Ga.

**Paving.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until May 23 to grade, curb and pave streets as follows: Contract No. 154, Abell and Ellerslie Aves., McPhail St. and University Parkway, 11,500 sq. yds. sheet asphalt, 5300 lin. ft. armored concrete curb, 350 sq. yds. brick gutter and 19,000 cu. yds. grading; contract No. 156, 33d St. extension from Hillen to Harford Rd., 9300 sq. yds. sheet asphalt, 3850 lin. ft. armored concrete curb, 500 sq. yds. brick gutters and 18,000 cu. yds. grading; contract No. 155, Woodberry Ave. from Pimlico Circle to Green Spring Ave., 13,000 cu. yds. grading; specifications from Comms. for Opening Streets, John H. Robinette, Pres., City Hall, where plans and profiles are on file; \$5 deposit for each set of specifications.

**Paving and Sewer Construction.**—E. E. Erwin, Recorder, Columbia, Tenn.—Bids until May 25 to pave W. 7th, S. Main, S. Garden and Railroad Sts. with asphaltic concrete; also bids until May 18 to construct sewers on S. Garden and S. Main Sts.; J. M. Dedman, Mayor.

**Pipe.**—Consumers' Gas & Fuel Co., Ned Palmer and T. W. Owen, Engrs., Mineral Wells, Tex.—Prices on 2 to 8-in. pipe.

**Piping.**—See Sawmill Feed, etc.—Vida Lumber Co.

**Plumbing Equipment.**—H. B. Webster, 1619 Southwest Life Bldg., Dallas, Tex.—Prices on plumbing equipment, such as shower baths, for \$20,000 clubhouse.

**Plumbing.**—P. G. Bushee, Vienna, Ga.—Will let contract for plumbing for \$3000 bungalow.

**Power Plant (Steam).**—Planters' Oil Co., Albany, Ga.—Prices on steam power plant; contemplates 3 78x20 boilers with 150-lb. working pressure, and 24x48-in. heavy duty Corliss engine with rope drive, or other equipment equivalent to this; second-hand guaranteed preferred boilers to be inspected by Hartford Insurance inspectors.

**Power Plant (Steam).**—See Mining and Crushing (Limestone) Machinery.—H. D. Terrell Land Co.

**Press (Baling).**—J. S. Young Co., 2701 Boston St., Baltimore, Md.—Prices on paper baling press.

**Pump.**—See Water Supply.—Henry U. Whipple.

**Pumps (Rotary).**—See Fire Equipment.—A. S. E.

**Pulverizers, etc.**—McNamee Kaolin Co., Robt. Spencer Finney, Pres., Bath, S. C. (New York office, Cumberland Bldg., Broadway and 54th St.).—Prices on pulverizer; also interested in electric motors.

**Rails.**—Southwestern Machinery Co., Memphis, Tenn.—12, 16 and 20-lb. relaying rails; for coal mine.

**Rails.**—Curtis & Shumway, Inc., general contractors, Lynchburg, Va.—30 tons 25 or 30-lb. T rail for industrial track; new or relayers; price f. o. b. Lynchburg.

**Rails, etc.**—H. C. Morrison, Augusta, Ga.—Prices on 200 tons 56 or 60-lb. relay rails; also 3000 standard cross-ties; seconds will answer.

**Rails, etc.**—A. I. Davis, Hess Coal & Coke Co., Box 834, Morgantown, W. Va.—Prices on 25 and 30-lb. steel rail—total outside 1000 ft., inside 400 ft., cable 1000 ft., spikes, ties, plates; also mine cars; has electric power.

**Road and Bridge Construction.**—State Highway Com., G. P. Coleman, State Highway Commr., Richmond, Va.—Bids until May 21 to construct 1 mi. gravel road between Osborne Turnpike and Wilton's Mill, Henrico County; also reinforced concrete bridge 25 ft. long over Deep Run, 6 mi. from Elko; plans and specifications on file with County Clerk Richmond and with State Highway Com., G. P. Coleman, Comms., Richmond.

**Road Construction.**—Union County Commissioners, Maynardville, Tenn.—To let contract about June 21 to construct macadam roads; \$50,000 available; Engr., Joe McDonald, Maynardville.

**Road Construction.**—Buncombe County, T. M. Howerton, County Engr., Asheville, N. C.—Bids until May 21 on concrete or asphalt for Hendersonville Rd.; about 100,000 sq. yds.

**Road Construction.**—Fayette County Court, R. J. Stegall, Clerk, Fayetteville, W. Va.—Bids until June 11 to grade and drain James River and Kanawha turnpike, Falls Dist., from Kanawha County line to

Mountain Cove Dist. line, 14.5 mi., including construction of retaining walls; plans, profiles, estimates, etc., from T. F. Malloy, Road Engr., Landisburg, W. Va.; specifications and plans also on file with Mr. Stegall; \$5 deposit for plans and specifications for each section.

**Road Construction.**—City Comms., City Hall, Earlington, Ky.—Bids until May 25 to improve State-aid road No. 54D4; 6300 cu. yds. earth excavation, 4086 cu. yds. macadam, 90 cu. yds. class "A" concrete, 70 cu. yds. class "B" concrete, 196 ft. 12-in., 56 ft. 15-in., 24 ft. 18-in. and 196 ft. 24-in. corrugated metal culverts and 775 lbs. reinforcing steel; plans and specifications may be seen and proposal forms obtained from R. E. Wipfler, Engr., Earlington, and from Dept. of Public Roads, Frankfort, Ky.; W. E. Rash, Mayor.

**Road Construction.**—Washington County Highway Comms., J. S. Allen, Ch. Engr., Greenville, Miss.—Bids until May 30 to surface with concrete, warrentite or asphaltic concrete 180,000 sq. yds. of highways; plans and specifications on file.

**Road Construction.**—Yadkin County Commissioners, E. C. Mayberry, Secy., Yadkinville, N. C.—To let contract June 5 to construct 27 mi. sand-clay roads; conditionally upon sale of bonds; A. P. Woodruff, Chrmn.

**Road Construction.**—Fayette County Court, R. J. Stegall, Clerk, Fayetteville, W. Va.—Bids until June 11 to construct road from Thurmond to Echo Mountain Rd., 1.8 mi., to include retaining walls; plans, estimates, etc., from T. F. Malloy, Dist. Road Engr., Landisburg, W. Va.; specifications and plans also on file with Mr. Stegall; \$5 deposit for each set of plans and specifications.

**Road Construction.**—Marengo County Comms., A. L. Hasty, Judge of Probate, Linden, Ala.—Bids until June 4 to repair 5 mi. gravel road south from Linden and gravel 2 mi. extension of same road; also to haul and load from 50 to 200 cars gravel from Meador's Pit to L. & N. Ry. at Myrtlewood; D. G. Wilkinson, County Engr.

**Road Machinery, etc.**—C. L. Cureton, Chrmn. Pickens County Highway Commission, Pickens, S. C.—Prices on tractor engines, road scrapers, cement and minor road tools.

**Road and Bridge Construction.**—Office State Highway Commission, G. P. Coleman, State Highway Commr., Richmond, Va.—Bids until May 25 to construct 1.36 mi. bituminous penetration macadam on River Rd. between Country Club and Goodland County line; also reinforced concrete bridge 20 ft. long over Westham Creek, 1 mi. from Westham; plans and specifications on file at Clerk's office, Richmond, and with State Highway Commission.

**Rock Mining and Crushing.**—Pontotoc County, Fourth Dist. Highway Commission (O. J. Knox, Chrmn.), Pontotoc, Miss.—To receive bids June 4 for mining and crushing native rock.

**Roofing.**—H. B. Webster, 1619 Southwest Life Bldg., Dallas, Tex.—Prices on tin and composition shingles and roofing for \$20,000 clubhouse.

**Rope (Wire, Steel).**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish 1200 fathoms (or 7200 lbs.) steel wire rope, schedule 1106, delivery Boston.

**Saw.**—Ronda Coop & Egg Case Co., Ronda, N. C.—Second-hand 24-in. circular resaw.

**Sawmill Feed, etc.**—Vida Lumber Co., W. P. Spahn, Mgr., Vida, Ala.—Prices on 12-in. by 36-ft. shotgun feed; second-hand drykiln piping and 4-in. by 6-in. steam piping; for installation Lomax, Ala.

**School Equipment.**—Panama Canal, Earl I. Brown, Gen. Purchasing Officer, Washington, D. C.—To open bids June 2 to furnish school equipment, including desks, chairs, tables, cases, cabinets, clocks, wastebaskets, mats, etc.; steel cable, link pins, brass tubing, copper tubing, rivets, washers, screws, valves, marine brushes, steam-jacketed kettles, stock pots, water coolers, window glass, hose, packing, tarpanulins, toweling, twine, gloves, paper cups, steel tapes, crayons, carbide, asbestos cement, lye, metal polish, soap polish, soap and cross-ties; blanks, etc., relating to circular (No. 1145) obtainable at this office or offices Asst. Purchasing Agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Masin, San Francisco; also from United States Engr. offices throughout United States.

**Sewer Construction.**—See Paving and Sewer Construction.—Columbia, Tenn.

**Sewer Construction.**—Comms. First Sewer Dist., Chas. L. Provost, Secy., New Iberia, La.—Bids until June 12 (change of date) on sanitary sewer system and sewage-disposal plant; plans and specifications on file office of Sewer Commission Secy. and office of Engr., Xavier A. Kramer, Magnolia, Miss.; copies of specifications, forms, etc., obtainable for \$10 on application to Engr. (Lately noted.)

**Shovel (Steam).**—M. J. Grove Lime Co., Lime Kiln, Md.—Prices on ½-yd. dipper steam shovel.

**Spyglasses.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish 1900 spyglasses (deck officers', etc.), schedule 1105, delivery Washington.

**Stave Mill.**—W. J. Norfleet, Suffolk, Va.—Stave mill equipment.

**Steel Cable, Brass and Copper Tubing, etc.**—See School Equipment.—Panama Canal.

**Steel (Sheet).**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish 9700 lbs. sheet steel (deep drawing, pickled, etc.); also 72,000 lbs. open-hearth sheet steel, schedule 1094, delivery Washington.

**Sugar.**—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids to furnish 1,710,000 lbs. granulated sugar, schedule 1113, various deliveries.

**Tank (Cypress).**—See Mining Machinery.—"Mill."

**Tanks (Chemical).**—See Fire Equipment.—A. S. E.

**Textile (Napping) Machinery.**—J. D. Kennedy, Columbus, Miss.—Prices on napper machine for napping blankets; good second-hand condition.

**Tanks (Oil).**—Maple Leaf Refining Co., 917 Colcord Bldg., Oklahoma City.—Prices on second-hand oil tanks for storage in Tulsa fields; capacities: 250, 500, 1000, 1500, 5000 and 10,000 bbls.

**Textiles, etc.**—Hjalmar Minde, P. O. Box 184, Bergen, Norway.—To represent manufacturers, on agency or sale connection basis for Norway, terms cash against documents at American bankers, for following: Table oilcloth; oilcloth for furniture; linoleum; floor cloth; footwear; galoshes; towels; flesh towels; flesh gloves; dish cloths; handkerchiefs; hooks and eyes; hairpins; buttons; sewing needles; pins and safety-pins; knitting pins; press buttons.

**Textiles, etc.**—M. R. Nathani, Nathani's Bldg., Commission Agent, Zanzibar, Africa.—To represent manufacturers of cotton goods; umbrellas; canes; men's bracelet watches; perfume; safety razors; stationery; men's belts; ties; collars; studs; toilet soap; cigarettes; cigars, etc.; invites samples, prices, etc.

**Ties.**—See Rails, etc.—H. C. Morrison.

**Tiling.**—Fowler-Flemister Coal Co., Milledgeville, Ga.—Names and addresses of manufacturers of corrugated Old Dutch style green roofing tile.

**Tinplate, etc.**—H. B. Morel-Bouquet, 5 Rue Cavendish, Paris, France.—To correspond with manufacturers of tinplate, vegetable wax, graphite, stearic and oleic acids, fish-glue, isinglass and paraffine.

**Turntables.**—W. Stewart, Newport News & Hampton Railway, Gas & Electric Co., Hampton, Va.—Two turntables; 4-ft. 8½-in. gauge; not less than 10-ft. diam.; 40-ton capacity.

**Tunnel Construction, etc.**—State Capital Com., A. N. Leecraft, Secy., Mercantile Bldg., Oklahoma City, Okla.—Bids until May 10 to erect powerhouse, install heating apparatus and construct tunnel for Oklahoma State Capitol Bldg.; specifications from Layton & Smith, Architects, Oklahoma City, or from Mr. Leecraft.

**Typewriters, etc.**—F. Javier Quijada, Palma de Mallorca, Balearic Islands.—To represent manufacturers of tanned leathers, particularly box calf; typewriters of good make for which there is no agent in Spain; extracts for tanning leather; dyes for coloring cotton, wool and jute.

**Water Supply.**—Henry U. Whipple, Daytona, Fla.—Prices on pneumatic water-storage system with electric pump.

**Water Turbine (Hydraulic).**—See Electrical Equipment.—Adairville Lighting Co.

**Water-works.**—City of Bogalusa, La., K. I. Bean, City Clerk.—Bids on water pipe, hydrants, etc., and installation of same; for information and specifications address City Clerk.

**Woodworking Machinery.**—Williams Lumber Co., Miami, Okla.—Data and prices on good first-class electrically-propelled rip and cut-off saw and jointer, complete, including motor; for retail lumber yard.



## RAILROAD CONSTRUCTION

## RAILWAYS

Fla., Lake Wales.—Seaboard Air Line has let contract to A. F. Langford of Valdosta, Ga., for an extension of 5 mi. from Wallinwa—which is about 15 mi. east of Lake Wales and the present terminus of the Kissimmee Valley extension—the new work, which has begun, to be in an easterly or southeasterly direction. Line practically all tangent and grade not over 7 per cent. D. M. McKey, locating engineer, Plant City, Fla., will supervise the construction.

Fla., Malone.—Alabama, Florida & Southern R. R. is reported about to build an extension from Malone to Greenwood, Fla., about 6 mi. Survey is being made. E. L. Marbury, Malone, is Pres.

Fla., Miami.—Notice of intention to apply June 11 to charter the Tamiami Ry. Co. for the purpose of building the railroad proposed by the Tamiami Trail Corp. from Miami westward, northwest and then southwest to Chevelier Bay, about 68 mi. west of Miami, is published. The directors of the railway are: J. F. Jaudon, Pres.; T. O. Wilson, V.-P.; Geo. F. Cook, Secy.; P. B. Jaudon, Treas.; Geo. T. Morgan, B. F. Markle, Ivan S. Jaudon, R. A. Coachman, E. K. Jaudon, J. P. Henry and L. H. Dasher. Headquarters to be at Chevelier, Monroe County, Florida, but temporary office at Miami.

Fla., Pensacola.—Gulf, Florida & Alabama Ry. plans to make large expenditures for terminal and spur tracks to industries at and near Pensacola. It is also contemplated to extend from the northern terminus at Kimbrough, Ala., to Jasper, Ala., about 125 mi. F. E. Dewey is operating receiver and Philip D. Beall, co-receiver, both at Pensacola.

Ga., Lincolnton.—Contract is reported let to the Brooks-Cullaway Co. of Atlanta for extension of the Washington & Lincolnton Ry. from Lovelace to Lincolnton, Ga., about 7 mi. J. R. Dyson, Washington, Ga., is Pres.

Ga., Waycross.—Atlanta, Birmingham & Atlantic Ry. Co. contemplates extending from Waycross to Jacksonville, Fla., about 75 mi., and engineers are reported running preliminary surveys. L. L. Beall, Atlanta, is Ch. Engr.

Ky., Ludlow.—Cincinnati, New Orleans & Texas Pacific Ry., it is reported, will construct additional track facilities at Ludlow. C. Dougherty, Cincinnati, O., is Ch. Engr.

N. C., Shelby.—J. A. Vandegrift, 148 Broadway, New York, has been granted extension of time to May 20 by the Cleveland County Commissioners to arrange right of way preliminaries for construction of the proposed railroad from Shelby to Casar, N. C., 21 miles for which \$120,000 of bonds were voted some time ago. It is further stated that the contractor must give a \$5000 bond to guarantee construction.

Okl., Picher.—Southwest Missouri Railroad Co. plans to extend its line from Baxter Springs, Kans., to Picher, 7 mi. This will be a continuation of an extension from Galena, Kans., to Baxter Springs. A. H. Rogers of Webb City, Mo., is Pres. and Treas.

Okl., Tulsa.—Plans are under consideration for the construction of an electric interurban railway from Tulsa, south to Okmulgee, Okla., about 35 miles, to be part of a line from Muskogee to Oklahoma City, 125 miles. R. D. Long of Muskogee, Mgr. of the Muskogee Electric Traction Co., and others are interested.

Tex., Denton.—Announcement is made that construction of the proposed electric interurban railway from Dallas to Denton and Slaton, Tex., 58 mi., will begin immediately. Headquarters at Denton. Fred P. Holt is Ch. Engr., and A. E. DeMayo, V.-P. and General Mgr., will have charge of construction. Line will be known as Dallas Northwestern Traction, and will be built by the Standard Utilities Construction Co. of Denton. C. F. Hopkins of Tulsa, Okla., is Pres., and Ira E. Cornelius of Muskogee, Okla., Treas.

W. Va., Clarksburg.—Baltimore & Ohio Railroad is reported to have let construction contracts for the following: Hampton to Adrian, W. Va., 3 miles to connect with Coal & Coke Railway; to H. S. Kerbaugh, Inc., of Philadelphia; also branch from Flemington to Astor, W. Va., 6 miles, to J. Toner Barr of Pittsburgh. R. N. Begien, Baltimore is Chief Engr.

received until 11 A. M. May 15 for \$67,500 water and \$56,500 sewer 5, 5½ or 6 per cent. bonds. G. E. Mattison is Chmn. Water-works Com.

Ark., Waldron.—(Road).—Board of Commissioners Scott County has authorized issue of \$100,000 of bonds Road Improvement Dist. No. 1. Tom. Payne is County Judge. J. S. Hill is Chmn. of Board.

Fla., Bartow.—(Road, Bridge).—\$150,000 of 6 per cent. \$1000 denomination bonds Special Road and Bridge Dist. No. 2, Polk County, are voted. A. T. Mann is Chmn. County Comms.

Fla., Blountstown.—(Warrants).—Bids will be received until noon June 6 for \$42,000 of 5 per cent. 10-30-year \$500 denomination Calhoun County warrants. P. F. Halley is Chmn. of the Board County Comms., and J. R. Peacock, Clerk.

Fla., Ft. Myers.—(Road, Bridge).—Bids will be received until 2 P. M. June 8 for \$40,000 of 6 per cent. \$500 denomination bonds Special Road and Bridge Dist. No. 4, Lee County; dated May 1, 1916, and maturing \$2500 May 1, 1919, and \$2500 May 1 of each and every year thereafter until entire issue is paid. J. F. Garner is Clerk of Board of County Comms. Circuit Court of Lee County.

Fla., Jacksonville.—(Bridge).—Election is soon to be held in Duval County to vote on bonds for bridge to cost \$800,000. Frank Brown is Clerk Circuit Court.

Fla., Kissimmee.—(Road, Bridge).—Election is to be held June 16 to vote on \$100,000 of bonds Road and Bridge Dist. Nos. 1 and 2, Polk County. Address County Comms.

Fla., Lakeland.—(Funding).—City is authorized by Legislature to call an election to vote on \$125,000 of 1-10-year bonds; interest not exceeding 6 per cent. H. L. Swatts is City Clerk.

Fla., Mayo.—(Road, Bridge).—All bids received for the \$250,000 of 5 per cent. Dixie Highway Special Road and Bridge Dist., Lafayette County, bonds were rejected. Cullen W. Edwards is Clerk County Comms.

Fla., Miami.—(School).—Election is to be held June 2 to vote on \$150,000 of 6 per cent. 30-year bonds Miami Special Tax School Dist. No. 2, Dade County, dated July 1, 1917. R. E. Hall is Supt. County Board of Public Instruction.

Fla., Miami.—(School).—Bids will be received until noon June 12 for \$15,000 of 6 per cent. bonds Biscayne Special Tax School Dist. No. 4, Dade County, dated June 1, 1917, and maturing \$1000 June 1, 1922, and \$1000 annually thereafter. R. E. Hall is Secy. County Board of Public Instruction.

Fla., Palatka.—(Water).—Bill has been introduced in the Legislature authorizing an issue of \$60,000 of bonds. Address The Mayor.

Fla., Tampa.—(Road, Bridge).—Bids will be received until 11 A. M. May 29 for \$100,000 of 5 per cent. 30-year \$1000 denomination bonds Citrus Park Special Road and Bridge Dist., Hillsborough County. W. P. Culbreath is Clerk Board of County Comms.

Fla., West Palm Beach.—(Road and Bridge).—Bids will be received until noon June 5 for \$11,500 of 5 per cent. bonds Special Road and Bridge Dist. No. 2, Palm Beach County, dated Sept. 1, 1912, and maturing 1942. L. Trevette Lockwood is Chmn. Board of Comms. Palm Beach County. Geo. O. Butler is County Clerk.

Ga., Doerun.—(School).—Election is to be held June 9 to vote on \$15,000 of bonds. Address School Board.

Ga., Oglethorpe.—(Bridge).—\$100,000 of 4½ per cent. \$1000 denomination Macon County bonds, dated April 1, 1917, and maturing 1918 to 1947, inclusive, have been purchased by Robinson-Humphrey-Wardlaw Co., Atlanta.

Ga., Thomasville.—(Water, Light, Fire Department, Street).—\$160,000 of 4½ per cent. \$500 denomination bonds are voted. L. H. Jerger is Chmn. Finance Com.

La., Alexandria.—(School).—Election is to be held June 5 to vote on \$9000 of 5 per cent. 20-year bonds Weichon-Latannier School Dist. No. 38, Rapides Parish. J. W. Bolton is Pres. Parish School Board.

La., Alexandria.—(Road).—Bids will be received until noon May 19 for \$75,000 of 5 per cent. bonds Road Dist. No. 14, Rapides Parish. T. W. Barrett is Pres. Board of Suprvs. of said district.

La., Alexandria.—(Road).—Ordinance has been prepared authorizing the issuing of \$51,500 of bonds of Road Dist. No. 12, Rapides Parish; maturity 1917 to 1936, inclusive. R. H. Jackson is Pres., and J. E. Munson, Secy. Board of Suprvs. of said district.

La., Gretna.—(Drainage).—Steps are being taken to issue \$300,000 of bonds for drainage improvements in sub-drainage Dist. No. 5 of the Fourth Drainage Dist., Jefferson Parish. Address Board of Comms.

La., Hahnville.—(Road).—Bids will be received until noon May 26 for \$70,000 of 5 per cent. bonds Road Dist. No. 2 St. Charles

Parish. Address Board of Suprvs. of Road Dist. No. 2, Parish of St. Charles, F. Felicien Lorio, Pres.

La., Jennings.—\$20,000 of 5 per cent. bonds, dated Nov. 1, 1916, and maturing 1917 to 1936, inclusive, have been purchased by J. L. Arlitt, Austin, Tex.

La., Oberlin.—(Road).—Bids will be received until 10 A. M. June 19 for \$75,000 of 5 per cent. 1-20-year bonds Allen Parish Road Dist. No. 2. Address G. M. King, Jr., Secy. Treas., Kinder, La. Further particulars will be found in the advertising columns.

La., Youngsville.—(Drainage).—Bids will be received until 2 P. M. May 29 for \$60,000 of 5 per cent. bonds Youngsville Drainage Dist. B. F. Flanders is Chmn. and Jerome Mouton, Atty. of Bd. of Dist. Comms.

Miss., Charleston.—(Road).—\$200,000 of bonds Road Dist. composed of Bonds 4 and 5, Tallahatche County, are to be issued; dated April 1, 1917. T. B. Abbey, W. B. Buford and R. C. Townes, Comms.

Miss., Gulfport.—(School).—Board of Supervisors Harrison County has authorized issue of \$4000 of Harrison Jackson County line school bonds.

Miss., Hernando.—(Road).—\$25,000 of 6 per cent. 20-year bonds Dist. No. 5, DeSoto County have been purchased at par, accrued interest and \$1,005 premium by a Chicago firm. Address County Comms.

Miss., Magnolia.—(School).—Election is to be held May 30 to vote on \$30,000 Pike County bonds for establishing agricultural high school at Godbold's Mineral Wells, near Summit. Address County Comms.

Miss., Meridian.—(Ice Plant).—Election is to be held May 31 to vote on bonds for ice plant. Jno. M. Dabney is Mayor, and B. L. Blanks, City Clerk and Treas.

Miss., Meridian.—(School).—Ordinance is passed by Mayor and City Councilmen providing for an election to vote on \$10,000 of 10-year \$1000 denomination bonds. Date for holding election not yet fixed. Jno. M. Dabney is Mayor, and B. L. Blanks, City Clerk and Treas.

Miss., Pascagoula.—(School).—Reported that Jackson County proposes to issue \$4000 for Harrison-Jackson County line school. Address Board of Supervisors.

Miss., Paulding.—(Road).—\$10,000 of 6 per cent. road bonds Supervisors Dist. No. 5, Jasper County, have been purchased by S. L. McLaurin, Brandon, Miss.

Mo., Benton.—(Road).—Election ordered for May 17 to vote on \$90,000 Scott County bonds, called off. Press reports state that another election is to be held June 3. Geo. W. Pearman is County Clerk.

Mo., Kirksville.—(Water, Light).—\$118,000 bonds defeated.

Mo., Springfield.—(Electric Light Plant).—Election is to be held June 16 to vote on \$500,000 of bonds. Address The Mayor.

N. C., Aulander.—(School).—\$15,000 of Aulander Farm Life School bonds are voted. Mr. T. E. Browne is Supr. Secondary Agricultural Education for the Agricultural Extension Service.

N. C., Biltmore.—(Street).—\$6000 of 2-20-year South Biltmore street-improvement bonds are voted, and bids for same will be received until noon May 22. Address H. V. Miller, Clerk. F. A. Walton is Mayor.

N. C., Boone.—(Highway).—\$300,000 of Watauga County bonds are voted. Address County Comms.

N. C., Charlotte.—(School).—\$250,000 of bonds recently voted will soon be placed on the market. T. L. Kirkpatrick is Mayor, and A. H. Wearn, City Clerk and Treas.

N. C., Concord.—(County Home).—Bids will be received until 1 P. M. June 14 for \$50,000 of 5 per cent. Cabarrus County bonds. Address Board of County Comms.

N. C., Edenton.—(School).—\$10,000 of Edenton Graded School Dist. bonds defeated.

N. C., Farmington.—(School).—\$5000 of 4 per cent. school district bonds are voted. Address E. L. Furches, Chmn. School Board, Mocksville, N. C., R. F. D.

N. C., Greensboro.—(School).—Election is to be held in Fentris Township, Guilford County, June 19 to vote on \$40,000 of bonds. Address County Comms.

N. C., Greensboro.—(Refunding).—Ordinance has been prepared providing for the issuing of \$75,000 of not exceeding 5 per cent. 40-year bonds. Jno. S. Michaux is City Clerk.

N. C., Jefferson.—(Road).—\$200,000 of Ashe County bonds defeated.

N. C., Lenoir.—(Road).—\$250,000 Caldwell County bonds defeated.

N. C., Lumberton.—(Road).—\$480,000 of Robeson County bonds defeated.

N. C., Rich Square.—(School).—Election is to be held in Rich Square School Dist., Northampton County, June 16 to vote on \$25,000 of bonds. Address Board of Trustees.

## FINANCIAL NEWS

## FINANCIAL CORPORATIONS

Ga., Savannah.—Morris Plan Co., capital \$50,000, with privilege of increasing to \$100,000, has made application for charter; Chas. G. Bell and others, petitioners.

Ga., Savannah.—Mercantile Bank & Trust Co., capital \$100,000, is organized with the following directors: Aaron Rauzin, Albert Blumberg, H. C. Shuptrine, A. J. Cohen, Francis W. Dasher, Joseph Lichtenstein, G. H. Johnson, Benjamin Weitz, William Marcus, Morris Bernstein, William G. Suttive, M. Wilensky and M. Blumenfeld.

Ky., Bond.—Bond State Bank inceptd.; capital \$15,000; incorporators, N. U. Bond, Geo. Pennington, W. R. Reynolds and W. J. Chestnut.

Md., Govans (P. O. Baltimore).—Bank of Govanstown has changed its name to the Citizens' State Bank; directors, John H. Eiser, Charles A. Cummins, Edmund O'Brien, Dr. Leonard K. Hirschberg, Samuel Want, W. Harry Noth and others.

Md., Hancock.—Union Exchange Bank (not Hellman Exchange Bank), capital \$50,000, is organized by John T. Mason and others. Business is to begin about June 1.

Md., Westport.—Westport Bank, capital \$25,000, will begin business about June 15. Carl V. Starkloff, Pres.; John H. Kramer, V.-P.; C. Walter Katenkamp, Cashier.

Mo., Joplin.—A new bank is being organized for East Joplin, capital to be \$75,000. J. V. Boyd and others are interested.

N. C., Asheville.—Bankers Trust & Title Insurance Co., Inc., capital \$250,000. C. N. Brown, Pres.; Hugh LaBarbe, V.-P.; S. M. Hanes, Secy.-Treas.

N. C., Raleigh.—Raleigh Morris Plan Co., authorized capital \$50,000, is organized by Industrial Finance Corporation, New York; E. C. Duncun, J. E. O'Donnell, C. J. Hunter, W. B. Drake and others.

Okl., Miami.—Third National Bank of Miami has made application for charter, capital \$100,000. Organizers: C. W. Dixon, Welch; C. J. Hobson, Blue Jacket; M. O'Bannon, Buffalo, Mo., and T. J. Hancock, Miami.

Okl., Newkirk.—A new bank, capitalized at \$25,000, is organized with P. S. Mason,

Pres.; W. S. Cline, V.-P.; Frank S. Midgley, Cashier.

Okl., Pocomasset.—First National Bank of Pocomasset has begun business; R. K. Wootten of Chickasha, Pres.; Jack Hill, V.-P.; Sam Laws, Cash.

Tex., George West.—First National Bank of George West has made application for charter; capital \$25,000.

Tex., Lamesa.—First National Bank of Lamesa, a conversion of the Dawson County State Bank of Lamesa, has made application for charter; capital \$40,000.

Tex., Tom Bean.—First National Bank of Tom Bean has made application for charter; capital \$25,000. This is a conversion of the Tom Bean State Bank.

Va., McLean.—Courtlands Title Co. inceptd.; capital \$25,000; D. S. Mackall, Pres., McLean; B. D. Boteler, Secy., Washington, D. C.

W. Va., Mount Hope.—First National Bank, chartered; capital \$30,000. Inceptrs.: A. W. Rodgers, Jacob Rinehart, Charles B. Halstead, A. D. Moseley and H. L. Brown. Business is to begin about July 1.

W. Va., Wheeling.—The Citizens Savings & Trust Co. and the Peoples Bank of Wheeling have been merged.

## NEW SECURITIES

Ala., Carville, P. O. East Tallassee.—(Transformer).—Town will soon hold election to vote on bonds for installing transformer and building pole line. Address N. S. Carr.

Ala., Dadeville.—(Road, Bridge).—\$245,000 of 5 per cent. 30-year Tallapoosa County bonds are voted to retire road and bridge warrants. Of the issue \$100,000 are to be sold now. W. G. Carleton is Judge of Probate.

Ala., Mobile.—(Road).—Petitions have been circulated. It is reported, asking the County Board of Revenue and Road Comms. to call an election to vote on \$400,000 of bonds.

Ark., Jonesboro.—(Drainage).—Bids will be received until 1 P. M. May 24 for \$300,000 of Arkansas drainage bonds; interest 5 and 5½ per cent. Address A. W. Hall, Secy. Further particulars will be found in the advertising columns.

Ark., Malvern.—(Water, Sewer).—Bids were

Capital and Surplus  
\$4,000,000



Total Resources  
\$38,000,000

## The Largest National Bank in the South

Liberal Accommodations to Manufacturing Corporations

**MERCHANTS-MECHANICS  
FIRST NATIONAL BANK  
OF BALTIMORE**

### The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.  
Capital \$1,500,000.  
March 30, 1915, Surplus and Profits,  
\$850,000.00.

OFFICERS:  
WALDO NEWCOMER, President.  
SUMMERFIELD BALDWIN, Vice-Pres.  
R. VINTON LANSDALE, Cashier.  
C. G. MORGAN, Asst. Cashier.  
Accounts of Mercantile Firms, Corpora-  
tions, Banks, Bankers and Indi-  
viduals Invited.

### Maryland Trust Company

HALTIMORE

Capital \$1,000,000

TRANSACTS A GENERAL TRUST AND  
BANKING BUSINESS

Correspondence and Interviews  
Invited

### The Palmetto National Bank

OF COLUMBIA

CAPITAL \$500,000.00  
Surplus and Undivided Profits \$250,000.00  
COLUMBIA, S. C.

## WE BUY BONDS CITY, COUNTY, SCHOOL and DISTRICT

Correspondence Invited from Officials and Contractors

**SIDNEY SPITZER & CO.**

New York Chicago Toledo  
Cincinnati Los Angeles

Southern Branch: BELL BUILDING, MONTGOMERY, ALA.

### We Buy Bonds

City, County, School and Road, from  
Municipalities and Contractors.

WRITE  
THE PROVIDENT SAVINGS BANK  
& TRUST CO.

CINCINNATI OHIO

### Incorporate Under DELAWARE LAWS

Complete information on application.

Delaware Registration Trust Co.

930 Market St. Wilmington, Del.

J. Ernest Smith, President and General Counsel.  
Chas. Warner Smith, Vice-President.  
Harry W. Davis, Secretary and Treasurer.  
Charles B. Bishop, Assistant Secretary.

### CORPORATION FINANCING

**HOBGEN & CO.**

508-9 Munsey Building  
Municipal Loans Baltimore, Md.

### Southern Cotton Mill Stocks

**A. M. LAW & COMPANY**

DEALERS  
SPARTANBURG, S. C.

### POWELL, GARARD & CO.

39 S. La Salle Street  
CHICAGO, ILL.

We Buy Southern Municipal Bonds  
(County, City, School, Road and Drain-  
age District).

### JOHN NUVEEN & CO.

First National Bank Building, CHICAGO

We purchase SCHOOL, COUNTY and  
MUNICIPAL BONDS. Southern Municipal  
Bonds a Specialty.

Write us if you have bonds for sale.

### First National Bank

RICHMOND, VIRGINIA

Capital and Surplus - - - - \$3,000,000  
JNO. B. PURCELL, President.

JNO. M. MILLER, JR., Vice-Pres.  
W. M. ADDISON, Cashier.

### THE BANK OF ALABAMA

ENSLEY, ALABAMA

R. A. TERRELL - President  
J. W. MINOR - Vice-President  
FOSTER HAMILTON Cashier

We Solicit Your Business

### MUNICIPAL BONDS City, County, Road and Drainage

Bought from Municipalities or from

CONTRACTORS

**WALTER E. ORTHWEIN**  
Established 1898. 220 N. 4th St., St. Louis, Mo.

### Municipal Bonds BOUGHT

from Contractors and Municipalities

**STACY & BRAUN**

Second National Bank Bldg., TOLEDO, O.

### WE BUY Municipal Bonds

ISSUED BY

Counties, Cities, School Districts  
and Road Districts.

WRITE US

**CUMMINGS, PRUDEN & CO.**

Second National Bank Building  
TOLEDO, OHIO

## Cities Service Co.

in its recently issued

**Annual Report**

reveals:

**\$48,000,000**

combined gross earnings of  
subsidiaries.

**\$10,000,000**

combined gross earnings of  
parent company.

**\$173,000,000**

total amount of stocks and  
bonds of subsidiaries and  
parent company in the hands  
of the public.

**200,000 H. P.**

additional turbine capacity  
ordered for the electric  
properties.

**51,000,000,000**

cubic feet of gas sold.

Cities Service Company is one  
of the largest Public Utility  
Organizations in America.

Write for Copies of the Report  
No. MR-100 to

**HENRY L. DOHERTY & CO.**

Fiscal Agents

60 Wall St. [BOND DEPT.] New York



This bank offers a special service  
to Southern brokers, manufac-  
turers, shippers and banks for  
the collection of drafts, particu-  
larly B/L drafts on Chicago  
and other Northern points.  
Please write us for particulars.

We also solicit correspondence  
and interviews with high-grade  
Southern concerns regarding a  
direct Chicago banking connec-  
tion.

### UNION TRUST COMPANY CHICAGO

Capital and Surplus, \$3,000,000.00  
Deposits, \$34,000,000.00

Established 1869

### We Have Issued a Pamphlet Containing

Address of the President  
to Congress  
April 2, 1917

Proclamation of the President  
April 6, 1917

Proclamation of the Mayor of the  
City of New York  
April 6, 1917

Address of the President to His  
Fellow-Countrymen  
April 16, 1917

Copies on Application

**The American Exchange  
National Bank**

128 Broadway New York City

### Large Loans Negotiated

Accounts Cashed

**L. N. ROSENBAUM & CO.**

80 Wall St., New York

N. C., Weldon—(Street).—Bids will be re-  
ceived until noon May 24 for \$35,000 of 5 and  
6 per cent. bonds maturing 1928 to 1945, in-  
clusive; denominations \$500 and \$1000. Geo.  
C. Green is Mayor. Further particulars will  
be found in the advertising columns.

N. C., Winston-Salem—(Road).—Bids will  
be received until noon June 11 for \$50,000  
of \$1000 denomination Forsyth County  
bonds, bearing 4½, 4% or 5 per cent. inter-  
est. J. M. Lentz is Clerk Board County  
Commissioners.

Okla., Bradley—(School).—\$12,000 of bonds  
are voted. Address School Board.

Okla., Hobart—(Park).—Election May 15  
to vote on \$10,000 of bonds. J. J. Hunter is  
Mayor.

Okla., Lahoma—(School).—\$15,000 Lahoma  
Dist., Garfield County 6 per cent. 20-year  
\$500 denomination bonds have been pur-  
chased at \$1287 premium by A. J. McMahon,  
Oklahoma City.

Okla., Oklahoma City—(Park).—Special  
dispatch to the Manufacturers Record says  
\$300,000 of 4½ per cent. \$1000 denomination  
bonds are voted, dated July 1, 1917. Mike  
Donnelly is Commr. Account and Finance.

Okla., Oklahoma City—Bonds approved  
by Atty. Genl.: \$13,000 Coyle, Logan Coun-  
ty, water-works, \$4000 Ramons water-  
works; \$25,000 Hollis, Harmon County  
school.

S. C., Charleston—(School).—\$10,000 of Mc-  
Clellanville, Charleston County, high-school  
bonds are voted. H. H. McCarty is County  
Supt. of Education.

S. C., Saluda—(Courthouse).—\$50,000 of 5  
per cent. 23-year Saluda County bonds have  
been purchased at \$1680 premium by Well,  
Roth & Co., Cincinnati.

S. C., Spartanburg—(School).—Bonds for  
Duncan School Dist. for school to cost  
\$7000 are voted. Address County Supt. of  
Education.

Tenn., Dyersburg—(Drainage).—\$90,000 of  
5½ per cent. bonds Bogota Drainage Dist.,  
Dyer County, have been purchased by the  
Citizens' Bank and First National Bank,  
Dyersburg.

Tenn., Dyersburg—(Liability).—\$150,000 of  
5 per cent. \$1000 Dyer County bonds have  
been purchased at par and \$7000 premium by  
Breed, Elliott & Harrison, Cincinnati.

Tenn., Henderson—(Funding).—\$15,000 of 6  
per cent. 20-year \$750 denomination bonds  
have been purchased at \$15,265 and accrued  
interest by John Nuveen & Co., Chicago.

Tenn., Huntsville—(Road).—A letter to  
the Manufacturers Record says that \$300,000  
of Scott County bonds recently offered were  
not sold. It was reported the bonds had  
been disposed of. W. H. Potter is County  
Judge.

Tenn., Lewisburg—(School).—\$55,000 Mar-  
shall County bonds defeated.

### CONTRACTORS AND MANUFACTURERS

TIME



CHECKS

We Make Them Promptly.

Headquarters for SEALS, STOCK CERTIFICATES, STENCILS

STEEL DIES, BRASS SIGNS, ENAMEL PLATES.

MEMORIAL PLATES, CHURCH SEALS AND PEW PLATES.

Made on Our Premises. Send for Catalogue.

**THE J. F. W. DORMAN COMPANY**  
BALTIMORE, MD.

### FOR SALE Timber, Coal, Iron, Ranch and Other Properties.

Southern States, West Indies, Mexico.

**GEO. B. EDWARDS**

(Broker.)

Tribeau Building. NEW YORK, N. Y.  
Confidential Negotiations. Investigations.  
Settlements and Purchases of Property.

### D. H. BURGESS & CO.

Exporters Importers

P. O. Box 115 PETERSBURG, VA.

Write us your needs in all  
lines of business

Write us about Investments in Birmingham  
Real Estate.

**Jemison Real Estate & Insurance Co.**

Real Estate  
General Insurance, Loans

211 N. Twentieth St. BIRMINGHAM, ALA.

## Strengthen Your Credit

by including among your assets

### United States Government Bonds

They provide the strongest pos-  
sible reserve, have an unusual  
loan value, and are exempt from  
all taxes with the exception of  
the Inheritance Tax. In view of  
these features, the rate of 3½%  
can be considered as liberal.

We are prepared to receive sub-  
scriptions to the Liberty Loan  
of 1917 for any amount and in  
the most suitable way.

### A. B. Leach & Co.

Investment Securities

62 Cedar St., New York

Chicago Philadelphia Buffalo  
Boston Baltimore



Tenn., Memphis — (General Liability Bonds).—Bids will be received until 2.30 P. M. May 22 for \$357,000 of not exceeding 5 per cent. bonds, dated Jan. 1, 1917, and maturing 1922 to 1943, inclusive. Denomination \$1000. T. C. Ashcroft is Mayor, and C. C. Pashby, City Clerk. Further particulars will be found in the advertising columns.

Tenn., Paris—(Filtration Plant, School).—

Election is to be held May 19 to vote on \$40,000 of 5 per cent. 30-year bonds. Address The Mayor.

Tenn., Springfield—(Pike).—Election is to be held in Robertson County June 9 to vote on \$150,000 of, not exceeding 5 per cent., \$1000 denomination bonds. Address C. J. Hohman, County Judge.

Tenn., Trezevant—(Light, Water).—Election is to be held to vote on \$20,000 of

B. A. BRENNAN, President

## THE CITIZENS COMPANY

BALTIMORE MARYLAND

Finances Corporations, Engages in Underwritings and Handles for its own account Complete Issues of Securities. Correspondence Solicited.

## WE BUY MUNICIPAL, COUNTY AND DISTRICT BONDS

FROM OFFICIALS DIRECT OR FROM CONTRACTORS

And are Equipped by Experience to Furnish Proper Advice and Legal Proceedings Write to Us

THE RUDOLPH KLEYBOLTE COMPANY

18 East Fourth Street Established 1891 Cincinnati, Ohio

## HULL-HARGETT & COMPANY

PIEDMONT BUILDING, CHARLOTTE, N. C.

MILL STOCKS AND HIGH-CLASS SOUTHERN SECURITIES

## We Buy City, County School and Drainage BONDS

FROM MUNICIPALITIES OR CONTRACTORS

We are in position to pay HIGHEST PRICES

Write or wire us your offerings

THE NEW FIRST NATIONAL BANK Assets, \$8,000,000 COLUMBUS, O.

## What Will Beat the Submarines?

### Your Money and Your Brains

A Handful of Men Can't Beat Germany  
Neither Can a Handful of Investors Finance the War

France has over ten million known investors.

The United States about three hundred thousand.

Manifestly, the small army of present investment buyers is hopelessly inadequate to take the great "Liberty Loan."

A great new army of buyers must be mobilized at once.

Join the ranks.

This is a matter of supreme importance.

You may not be able to join the fighting ranks, but you can help the fight by joining the ranks of subscribers to this "Liberty Loan," which will supply the money that the fighting ranks need for food, materials of war and ships.

Join the ranks.

We cannot see our allies fail for lack of supplies, or see France and Belgium starve.

Join the ranks.

The bonds will be for amounts of \$50 up—in reach of every American, and will be ready about July 1.

The rate of interest will be 3½%. They will be free of all tax, and the price will be par.

Help beat the submarines.

## John L. Williams & Sons

RICHMOND, VIRGINIA

CUT OUT, FILL IN, AND MAIL US YOUR SUBSCRIPTION TODAY

John L. Williams & Sons, Richmond, Va.:

Please enter my (our) subscription for \$.....  
United States Government "Liberty Loan" of 1917.

Address.....

## Municipal Bonds Purchased

Correspondence invited from investors wishing to sell their holdings of seasoned marketable Municipal Bonds, and from municipal officials and contractors in connection with entire new issues.

## THE NATIONAL CITY COMPANY

55 Wall Street, New York

PHILADELPHIA

BOSTON

## TOWNSEND SCOTT & SON

Bankers and Brokers

Industrial Financing in the South

We are interested in the financing of sound industrial enterprises of all kinds.

Loans made to corporations and municipalities.

Established 1832

BALTIMORE, MD.

## Alabama Audit Co.

BANK, COMMERCIAL,  
MUNICIPAL ACCOUNTING  
1122-24 Bell Bldg., Montgomery, Ala.  
Van Antwerp Bldg., Mobile, Ala.

AUDITS

Certified Public Accountant

INVESTIGATIONS

ACCOUNTING SYSTEMS

FRANK P. STRATFORD,

Peoples Nat. Bk. Bldg.

COLUMBIA, S. C.

Twenty-Five Years' Experience

## AUDITORS ACCOUNTANTS COST ACCOUNTING

New York, Louisville, Augusta, St. Louis, Baltimore, Pittsburgh, Cincinnati, Richmond, Chicago, Milwaukee, Columbus, Grand Rapids, Detroit, and West Virginia References.

State Public Service Utility Audit and Investigating Co., Inc.

306-307 Kanawha National Bank

CHARLESTON, WEST VIRGINIA

## COUNTY AND SCHOOL BONDS

The Mercantile Trust Company, Saint Louis, through its Bond Department, is always in the market for County and School Bonds. We have the facilities for handling whole issues of County, School or Municipal Bonds and all matters pertaining to them. We will be glad to hear from banks or investors who may wish to buy or sell high-grade bonds.

MERCANTILE TRUST COMPANY

ST. LOUIS, MO.

Capital and Surplus, \$9,500,000

W. L. SLAYTON & CO.

TOLEDO, OHIO

DEALERS IN

CITY  
COUNTY  
TOWNSHIP

BONDS

ROAD  
SCHOOL  
DRAINAGE

If you want to Buy or Sell, write for Prices

We solicit your patronage.

## BONDS

CITY, COUNTY, SCHOOL,  
ROAD, DRAINAGE, WATER  
Bought and Sold

We Purchase Direct or from Contractors

THE HUGH RIDENOUR CO.

COLUMBUS, OHIO

LOANS MADE TO STATES, CITIES, COUNTIES, ETC.

Also Entire Issues of Bonds Purchased

We prepare and certify as to the genuineness of  
MUNICIPAL BONDS

Largest Capital and Surplus of Any Financial Institution in Maryland or Any Southern State.

Established 1884

Resources \$21,000,000

MERCANTILE TRUST AND DEPOSIT COMPANY  
OF BALTIMORE

A. H. S. POST, President

F. G. BOYCE, Jr., Vice-President

## CONDENSED REPORT TO COMPTROLLER

# The First National Bank

OF BIRMINGHAM, ALA.

ALABAMA'S FIRST MILLION-DOLLAR BANK

STATEMENT MAY 1, 1917

## RESOURCES

Loans and Discounts.....	\$12,063,499.17
Overdrafts.....	259.12
U. S. Bonds (par).....	1,500,000.00
State of Alabama Bonds..	127,000.00
Stock in Fed. Reserve Bk..	90,000.00
Other Stocks and Bonds...	1,482,334.08
Banking House.....	367,246.85
Other Real Estate.....	112,291.85

## CASH

In Vault....	\$1,412,327.02
With Banks..	2,885,668.56
With U. S. Treasurer..	89,000.00
With Federal Res. Bank	789,285.03

\$ 5,176,280.61

\$20,918,911.68

## LIABILITIES

Capital Stock.....	\$ 1,500,000.00
Surplus and Profits.....	1,562,271.67
Reserved for Taxes.....	17,038.29
Circulation.....	1,400,000.00

## DEPOSITS

Individual \$14,158,113.53
Bank..... 2,156,488.19
U. S..... 125,000.00

\$16,439,601.72

\$20,918,911.68

## OFFICERS

J. H. BARR, Chairman

OSCAR WELLS, President	THOMAS HOPKINS, Cashier
J. H. WOODWARD, Vice-President	F. S. FOSTER, Assistant Cashier
J. K. FLEMING, Vice-President	THOMAS BOWRON, Assistant Cashier
J. E. OZBURN, Secretary Savings Department	
J. L. CROSS, Auditor	

PARTICULAR ATTENTION GIVEN TO COLLECTIONS  
DIRECT CONNECTIONS AT ALL ALABAMA POINTS

CHARLES L. HEHL, C. P. A., President JOHN KUCHLER, C. P. A., Vice-President  
ERNEST E. WOODEN, C. P. A., Sec. and Treas.

## BALTIMORE AUDIT COMPANY

901-903 Calvert Building

BALTIMORE, MD.

## BARNES SAFE &amp; VAULT CO.

ROBT. H. BARNES Prop.

Estimates furnished on Diebold Safes and Vaults. We have the largest stock of new and second-hand safes south of New York.

12 N. 12th Street

RICHMOND, VA.

## York Safe and Lock Company

MANUFACTURERS OF

## SAFES and VAULTS

YORK, PA.

BALTIMORE, MD.

## To Manufacturers and Capitalists

Contemplating the Establishment of Industrial Enterprises

Attention is called to the exceptionally favorable location of

## NEWPORT NEWS, VA.

on Hampton Roads, fifteen miles from the sea, deep water, railway and sea transportation facilities unrivalled. Climate salubrious. Apply to

W. B. LIVEZEY, President

OLD DOMINION LAND COMPANY  
NEWPORT NEWS, VA.

## CONVERSE COLLEGE

SPARTANBURG, S. C.

Is one of the only six women's colleges in the South honored by membership as a standard college in "The Association of Colleges and Preparatory Schools of the Southern States." Its B.A. degree is accepted by the highest grade Colleges and Universities, and admits, without further work, to candidacy for the M.A. degree. It has separate science, music and library buildings; dormitories limited to 190; gymnasium and infirmary; 42-acre campus, and 38 teachers and officers. It is 35 miles from the Blue Ridge Mountains, and has an ideal winter climate. It owes no debts, and has an endowment. It is accessible North, East, South and West by six lines of railway. If you wish a catalogue, address

ROB'T. P. PELL, Litt. D., President Spartanburg, S. C.

bonds to install electric-light plant and water-works plant improvement bonds. Address The Mayor.

Tenn., White Bluff—(Street).—\$5000 of 5 per cent. 20-year bonds are voted. Address Town Commrs.

Tex., Austin.—State Board of Education has purchased school district bonds aggregating \$56,300.

Tex., Austin.—Bonds approved by Atty. Gen.: \$4000 of 5 per cent. 10-40-year Cement Independent School Dist., Dallas County; \$50,000 of 5 per cent. Sherman Park and auditorium bonds; \$10,000 5 per cent. Megargel Independent School Dist.; \$400 of 5 per cent. 5-20-year Oakville Independent School Dist. \$50,000 of 5 per cent. 5-40-year Oldham County road.

Tex., Corsicana—(Water).—\$50,000 of 5 per cent. 40-year \$1000 denomination bonds are voted and will be dated about April 1, 1918. Date for opening bids not yet decided, but it will probably be a year before bonds are offered. J. A. Harper is City Clerk.

Tex., Galveston—(Causeway).—All bids received May 7 for \$500,000 of 5 per cent. 20-40-year Galveston County bonds rejected. John M. Murch is County Auditor.

Tex., Leesville—(School).—\$8000 of bonds Leesville Common School Dist., Gonzales County, are voted. Address Board of Education.

Tex., Post—(School).—\$35,000 of bonds recently sold were awarded as follows: Garza County school fund, \$25,000; a Houston bond company, \$11,000. A. R. Anderson is County Judge.

Tex., Trinity—(County Bonds).—\$5998 of 6 per cent. Trinity County 10-40-year bonds, dated August 28, 1916, have been purchased by J. L. Arlitt, Austin, Tex.

Tex., Wichita Falls—(Road).—Election is to be held in Wichita County May 24 to vote on \$750,000 of 5 per cent. \$1000 denomination bonds maturing \$19,000 each year for 10 years; balance \$500,000 optional after 10 years. Address Judge Harvey Harris.

Va., Danville—(Refunding).—Bids will be received until noon May 22 for \$100,000 of 4½ per cent. refunding bonds. Robert Brydon is City Auditor.

Va., Shenandoah—(Power Plant, Filtration).—\$30,000 of 6 per cent. \$1000 denomination hydro-electric power plant and filtration bonds maturing 1937 have been purchased at 100.33½ by W. L. Slayton & Co., Toledo, Ohio.

W. Va., Charleston—(Armor-plate and Projectile Site).—Ordinance has been introduced in the City Council providing for an election to vote on \$300,000 of 5 per cent. 11-year bonds. L. C. Massey is Clerk.

W. Va., Clarksburg—(Road).—Bids will be received until 2 P. M. May 31 for \$300,000 of a \$300,000 authorized issue of 5 per cent. \$1000 denomination bonds, dated August 1, 1916, and maturing August 1, 1925 to 1941, inclusive. J. James Crews is Clerk County Court Harrison County. Further particulars will be found in the advertising columns.

W. Va., Martinsburg—(Street, Water, etc.).—\$210,000 of 5 per cent. 34-year street, water, fire department, bridge and sewer bonds are voted. Dated Jan. 1, 1917. Address H. H. Emmett. P. W. Leiter is Mayor.

W. Va., Williamson—(Road).—\$1,000,000 Mingo County bonds are voted. Address County Commrs.

## FINANCIAL NOTES

The Union Trust Co., Tribune Bldg., Chicago, has issued a very interesting booklet presenting a statement of its condition, together with a brief outline of its various functions. Its total resources are over \$40,000,000.

The Oklahoma State Bankers Association, at its annual convention last week in Muskogee, elected officers for the following year, thus: Pres., H. H. McCauley of Sapulpa; Vice-Pres., G. C. Robertson of Lawton; Treas., W. B. Stevens of Rocky; Secy., H. E. Bagby of Oklahoma City.

The Jemison Company (unincorporated), Birmingham, Ala., announces that on May 1, it took over the mortgage loan business of the Jemison Real Estate & Insurance Company and the active management and control of the mortgage loan department will remain under the supervision of the same individuals as before. The announcement is signed by Robert Jemison, Jr., for the company.

## Do You Pay Big Prices

for specially ruled business forms and wait for weeks to get them?

It is necessary in some cases, but many of your needs can be met by the **LOOSE-IP** stock forms, carefully designed and made in such quantities that prices are lower.

Here are some of the 300 forms, made in different sizes, that you can get from the **LOOSE-IP** stock.

Accounts Payable

Bank Statement

Bills Payable

Cash Journal

Cash Book

Claim Record

Check Record

Cash Received

Pay Roll

Stock Sheets

Daily Statement

Sales Summary

Time Tickets

Salesmen's Expense

Engineers' Sheets

Inventory Sheets

Invoice Sheets

Purchase Order

Tax Record

Delivery Receipts

Monthly Statements

Minute Sheets

Meter Readings

Order Blanks

Order Register

Plat Sheets

Petty Cash

Quotation Record

Trial Balance

Recap Sheets

and for every one of them there's a binder that meets the purpose.

## ASK YOUR STATIONER

## NOTE

**LOOSE-IP** Books and Forms Are Acknowledged the Best by both Dealers and Users.  
WHY SUBMIT TO SUBSTITUTION?

SEND FOR CATALOG J-15

## Irving-Pitt Manufacturing Company

Largest Loose Leaf Manufacturers in the World

Kansas City, Missouri







Frederick Street, Baltimore, Md.  
Granite Block Pavement filled  
with Barrett's Paving Pitch.

# Barrett's PAVING PITCH

## The Trouble-Proof Filler

Here is a list of common troubles that *can't* happen to a pavement if you use Barrett's Paving Pitch:

It *can't* crack.

It *can't* bulge from expansion.

It *can't* thrust curbing out of line or manholes out of place.

It *can't* "explode" on a hot day.

It *can't* get damaged by frost in the foundation.

It *can't* get noisy by the development of resounding air-spaces.

It *can't* impede underground pipe repairs.

It *can't* admit water to the foundation.

It *can't* get slippery—the grooves are always on duty.

It *can't* be damaged by immediate admission of traffic.

With Pitch filler it is easier to get a good block-paving job than with any other filler. It isn't fool-proof, but its inherent qualities make it possible to get good work with a

minimum of trouble. The standard Pitch is Barrett's Paving Pitch. Look for the label on the barrels.

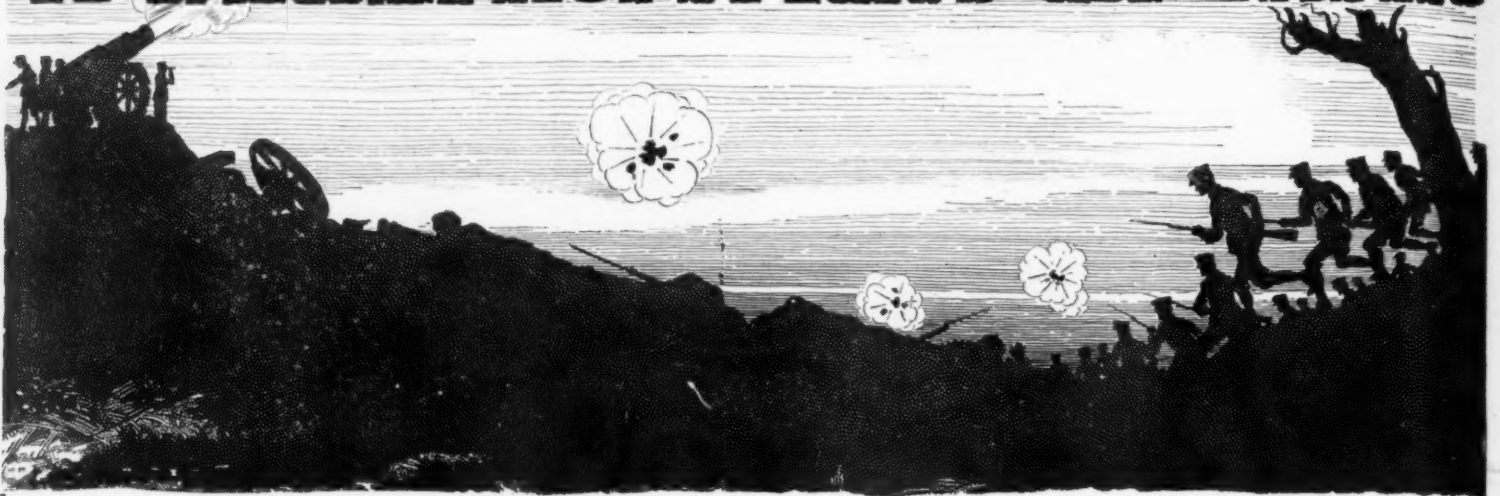
Booklets free on request. Address our nearest office.

The **Barrett** Company

New York	Chicago	Philadelphia	Boston	St. Louis	Cleveland	Cincinnati	Pittsburgh
Detroit	Birmingham	Kansas City	Minneapolis	Nashville	Salt Lake City	Seattle	Peoria
THE PATERSON MANUFACTURING COMPANY, Limited:				Montreal	Toronto	Winnipeg	
Vancouver		St. John, N. B.		Hallifax, N. S.	Sydney, N. S.		



# A DECLARATION OF WAR



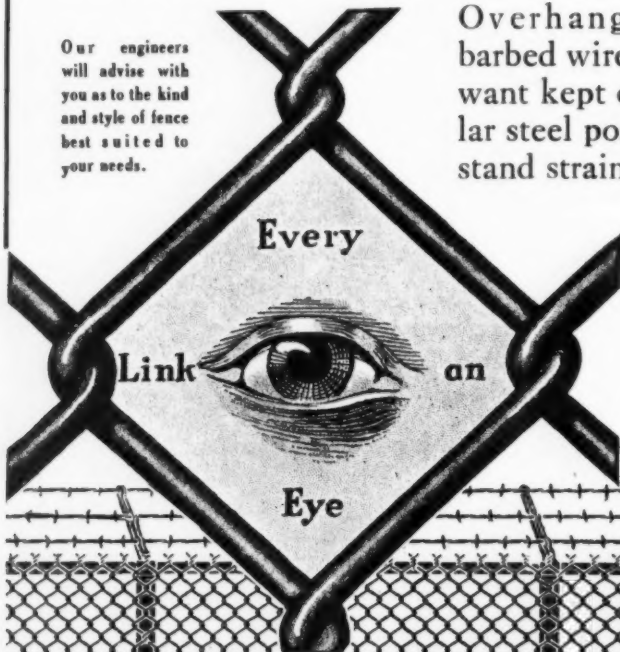
Has forced us to a keen realization of the need for proper preparedness. The safety of America's industrial bulwarks—her big manufacturing plants—must be assured.

One of the first precautions taken at plants whose output at this critical time, is required by the U. S. Government, is the erection of factory fencing that really protects.

## Cyclone Property Protection Fencing

fully measures up to war-time requirements. It presents to the would-be intruder a non-climbable wall of chain link woven steel. Fabric made of best quality, heavily galvanized wire, woven into small mesh which prevents any marauder gaining a toe-hold.

Our engineers will advise with you as to the kind and style of fence best suited to your needs.



Overhanging arms carrying barbed wires keep out those you want kept out, and heavy tubular steel posts are built to withstand strain from all sides.

Cyclone Property Protection Fence reduces risk of fire and losses. It cuts the cost of watchmen to a mere fraction and pays for itself thru these savings.

**Fence that costs less per foot, costs more per year**

*Our free illustrated catalog is one of the worth while books we shall be pleased to send you on request.*

### CYCLONE FENCE COMPANY

FACTORIES:

WAUKEGAN, ILL.

CLEVELAND, OHIO

BRANCHES:

Chicago Detroit New York City Oakland, Cal. Portland, Ore.





## The South's Greatest Opportunity

The South today holds the opportunity for which the nation, its industrial men—scientists, capitalists and others—are seeking, and have been seeking for a long time.

Full with natural resources—mineral, water powers, timber and agricultural—that hold great possibilities—assets that in their present condition are liabilities. That can furnish us with metals, iron, steel, copper, nickel, tin, zinc, silver, gold, all useful, with minerals to manufacture chemicals. Salt beds and brine to furnish our industries with soda, chlorine, bleach to make soap, chemicals, pharmaceutical chemicals and preparations for our hospitals, for our textile industries, fertilizers, dyestuffs, explosives, petroleum, asphalt, leather and glue. Minerals that will furnish us with cement, glass, porcelain, pottery, bricks and a great array of valuable building material—coal to operate our plants, make gas and furnish us with the base by-products for our dyestuffs, explosives, waterproofing preparations, pharmaceutical products, photographic chemicals, and the solvents and other materials that keep some forty industries going and their workers in employment.

Water powers, at present exerting themselves upon the rocks, should furnish the electric motive power in plants to convert the dormant resources into wealth-producing materials for the South, that should bring into the South great electro-chemical industries to compensate the nation for the loss of Niagara, to keep as national industries those now compelled by that loss to locate in foreign countries, even across the seas. To furnish us with the caustic and bleach for our many industries, and to fix the air nitrogen for our fertilizers and explosives.

The South's timber, too, holds wonders in its hard and soft wood for building purposes, for rosin and turpentine, paper, and for distillation and charcoal, to furnish products for a great number of industries that know not their content nor vastness.

And the agricultural-industrial products for soya bean oil, peanut oil, cotton oil, and their cattle food by-products, the candelilla wax plant, and the rubber making and producing plants, for food, soap, grease, paint, varnish and other industries.

With all these, to mention but a

## THIRD NATIONAL EXPOSITION OF CHEMICAL INDUSTRIES WEEK—SEPT 24<sup>TH</sup>

### Some Exhibitors

in the

### Southern Opportunity Section

Carolina, Clinchfield & Ohio  
Railway Co.

Nashville, Chattanooga & St.  
Louis Railway.

State of North Carolina.

Southern Railway System.

Central of Georgia Railway.

Tennessee Coal, Iron & Rail-  
road Co.

Products Sales Co.

Norfolk & Western Rwy. Co.

B. Mifflin Hood Brick Co.

Chemical Construction Co.

Freeport Sulphur Co.

At the

### Grand Central Palace New York



Grand Central Palace

### A few Exhibits Last Year



few, does the South hold the greatest opportunity that the nation can offer today to her industrial men and financiers.

With transportation facilities, closeness to world markets, both by rail and water, and plenty of labor, the South will make her resources known.

To the Exposition of Chemical Industries next fall the South is bringing the material in quantities sufficient for the most courageous and strong business men—industrial and financial—of the nation, to examine closely and conveniently, to gain that information

necessary for the development that shall follow.

This Exposition is not an experiment, it is an established necessity in the economic development of the industries and the resources of the nation, and as such has become firmly fixed in the minds of men who will visit it and of those who have already capitalized their opportunities gained at earlier expositions. It is not an idling place for pleasure-seekers, but a place for serious-minded persons, where great ventures are begun and industries have their inception. To

which nearly the entire commercial wealth of the nation turns for light, ideas, opportunities and the possibilities of the future.

With the country now in its greatest need for materials for peaceful and war pursuits, the South full with those things, its resources, in greatest demand, it must be plainly evident where the greatest opportunity lays.

In September at the Exposition of Chemical Industries the South will have on display the resources she offers to finance and industry for development.

# DIRECTORY ARCHITECTS      ENGINEERS      CONTRACTORS

Detailed classification of specialized work undertaken by those  
having cards in this Directory will be found in Classified Index.

**MILBURN, HEISTER & CO.**
*Architects*

WASHINGTON, D. C.

**THE ARNOLD COMPANY**
*Engineers—Constructors  
Electrical—Civil—Mechanical*

 105 South La Salle St. CHICAGO  
111 Broadway NEW YORK

**A. LANGSTAFF JOHNSTON, Jr., M.E., E.E.**  
Mutual Building Southern Associate of RICHMOND, VA.  
**MOSES, POPE & MESSER, Inc.**  
Consulting Engineers  
Mech. Elect., Civil, Chemical and Industrial  
365 Fifth Avenue NEW YORK  
**HENRY WELLES DURHAM, C. E.**  
Associated Highway and Municipal Engineer.

**DOW & SMITH**
*Chemical Engineers Consulting Paving Engineers*  
A. W. Dow, Ph.B. F. P. Smith, Ph.B.  
Mem. Am. Inst. Ch. Engrs.  
Mem. Am. Soc. Civ. Engrs.  
Asphalt, Bitumens, Paving, Hydraulic Cement,  
Engineering Materials  
181-3 E. 23d Street NEW YORK

Government Landscape Architect—1910-1916.

**GEORGE BURNAP**  
Landscape Architect  
Washington, D. C.

PARKS SUBDIVISIONS ESTATES

**DAY & ZIMMERMANN, Inc.**
*Engineers*

 Layout, Design, Construction, Valuation  
and Examination of Industrial Plants and  
Public Service Properties. Management  
of Public Service properties.  
611 Chestnut Street PHILADELPHIA

**WINTERS & DOVE**
*Civil and Hydraulic Engineers*

 Water Works, Water Filtration, Sewers, Sewage  
Disposal, Pavements and Roads.  
Surveys, Plans, Specifications, Estimates, Reports  
and Appraisals.  
311-312 Merchants Nat'l Bank Bldg.  
FORT SMITH, ARK.

**GILBERT C. WHITE, C. E.**

 M. Am. Soc. C. E.  
M. Am. W. W. Assoc.

*Consulting Engineer*

 Water Works Streets  
DURHAM, N. C.

**HUGH L. COOPER & CO.**
*General Hydraulic Engineering*

 Including the Design, Financing, Construction  
and Management of Hydro-Electric  
Power Plants.  
101 Park Avenue NEW YORK

 J. M. CLARK, Mem. A. I. M. E.  
C. E. KREBS, Mem. A. I. M. E.  
G. R. KREBS J. W. MORGAN

**CLARK & KREBS**
*Civil and Mining Engineers and Geologists*

 Coal, Oil and Gas  
Railroad and Municipal Engineering  
CHARLESTON, W. VA.

**MORSE, HALL & COCKEY**
*Consulting Engineers*

 ROBERT B. MORSE HARRY R. HALL  
M. Am. Soc. C. E. Assoc. M. Am. Soc. C. E.  
VINTON D. COCKEY  
Specialties—Water Supply and Sewerage,  
Typhoid Fever Investigations, Landscape  
Developments, Roads and Paving.  
324 N. Charles St. BALTIMORE, MD.

**LOUIS G. CARLISLE**
*Architect*

VICKSBURG, MISS.

**MORRIS KNOWLES**

M. Am. Soc. C. E. Mem. Am. Soc. M. E.

*Hydraulic and Sanitary Engineer*

 Investigations and Valuations for Purchase  
or Financing Water and Sewer  
Systems, Water Power, Drainage and  
Irrigation Systems.  
1200 B. F. Jones Law Bldg. PITTSBURGH, PA.

**W. E. MOORE & COMPANY**
*Engineers*

 Reports, Designs, Supervision, Public  
Service Properties, Power Developments,  
Distribution and Application.  
Union Bank Building PITTSBURGH, PA.

**WILLIAM SPEED**
*Civil Engineer and Landscape Architect*

 Chief Engineer Louisville-Nashville  
Division Dixie Highway.  
Starks Building LOUISVILLE, KY

**WILLIAM A. STANTON**
*Architect and Structural Engineer*

 All Classes of Concrete and Steel Construction.  
308 First Nat. Bank Bldg.  
VICKSBURG, MISS.

**BROWN & CLARKSON**
*Civil and Mining Engineers*

 Comprehensive Town Planning, Land Subdivision,  
Traffic Problems, Road and Street Systems.  
Precise Surveys, Triangulation, Typographic Property,  
Geological Surveys for Oil and Mine Development.  
Oxford Bldg., 14th St. and N. Y. Ave.  
WASHINGTON, D. C.

 W. M. GARDNER, Mem. Am. Soc. C. E. H. N. HOWE,  
Assoc. Mem. A. M. Soc. C. E.

**GARDNER & HOWE**
*Engineers*

 Designs, Estimates and Supervision;  
Concrete Bridges, Viaducts, Buildings,  
and other Structures.  
Porter Building MEMPHIS, TENN

**EDWIN WORTHAM, E. E.**
*Consulting Engineer*

 Industrial Plants, Factories, Municipal Work  
of all kinds, Steam and Electric Railways,  
Public Utilities, Reports, Valuations, Supervision,  
Franchises Drawn, Properties Operated.  
Suite 47, Allison Bldg. RICHMOND, VA.

D. F. MORTON G. G. WHITE

**MORTON & WHITE**
*Architects and Engineers*

JOHNSON CITY, TENN.

**FREDERICK H. LEWIS**
*Civil and Mechanical Engineer*

 Plans, Specifications and Supervision  
for Industrial and Electric Plants.  
732 Brown-Marx Bldg BIRMINGHAM, ALA.

**C. L. BROOKS ENGINEERING CO.**
*Packing-House and Cold-Storage Engineers.*

 We help you raise the capital, build the  
plant and run it successfully. We make  
a specialty of Southern plants.  
Main Office—MOULTRIE, GA.  
MINNEAPOLIS, MINN. ATLANTA, GA.  
736 Plymouth Bldg. 711 Empire Bldg.

**WALTER G. FRANZ**

Mem. A. S. M. E. Assoc. A. I. E. E.

*Consulting Engineer*

 Designing and Superintending of Mechanical,  
Electrical and Sanitary Work.  
Union Trust Bldg. CINCINNATI, OHIO

**GALVESTON BLUE PRINT & SUPPLY CO.**
*Architects and Engineers' Supplies.*

 Continuous Blue Printing Machinery.  
Prompt Service.  
GALVESTON, TEXAS

**MARTIN J. LIDE**
*Consulting and Constructing Electrical  
and Mechanical Engineer*

BIRMINGHAM, ALA.

**WADDELL & SON**
*Consulting Engineers*

 Reinforced Concrete and Steel Bridges.  
Elevated Railways. Difficult Foundations.  
Advisory Services and Appraisals.  
Suite 500-165 Broadway, New York  
MAIN OFFICE, KANSAS CITY, MO.

**E. W. MYERS**
*Consulting Engineer*

 Water Power Water Supply Sewerage  
GREENSBORO, N. C.

**DANIEL B. LUTEN**
*Designing and Consulting Engineer*  
Reinforced Concrete Bridges exclusively.  
Associate Engineers in each State.  
INDIANAPOLIS, IND.

**GEO. F. WESTON**

Member Am. Society Agricultural Engineers

 Preliminary Reports and Operating Plans for  
SOUTHERN AGRICULTURAL DEVELOPMENTS  
Soils, Drainage, Livestock and Cropping  
Twenty-seventh Year  
36 East 23rd Street NEW YORK, N. Y.

**WILLARD, BOGGS & CO.**
*General Contractors*

 Water Power Development Railroad Construction.  
Buildings.  
SPARTANBURG, S. C.

**CHARLES T. MAIN**

Member A. S. M. E.

*Textile Mills*

WATER POWER DEVELOPMENTS

201 Devonshire Street BOSTON

**WILLIAM C. SPIKER, C. E.**

Mem. Am. Soc. Civ. Engrs.

*Consulting Engineer*

 Reinforced Concrete and Structural Steel  
Buildings and Bridges.  
1408-9 Candler Bldg. ATLANTA, GA.

**CLARENCE W. MARSH**
*Engineer*

 Industrial Developments.  
Chemical and Electrochemical Plants.  
101 Park Ave. NEW YORK CITY

**KNIGHT & QUAYLE**
*Consulting Engineers*

 Water Works, Water Supply and Purification, Flood  
Prevention, Sewerage and Sewage Disposal, Municipal  
Sanitation and Wastes Utilization, Garbage Collection  
and Reduction, Supervision and Operation of Sanitary  
Works, Pumping Engine Efficiency Tests,  
Chemical, Biological and Mechanical Analyses,  
Reports, Valuations, Designs.  
408 Times Building CHATTANOOGA, TENN.

## Architects      Engineers Contractors

Your card on these pages  
will place you directly before  
the active forces of  
the South and Southwest.

**C. W. HUMPHREY**
*Consulting Engineer*

 Designing—Financing—Construction—  
Operation.  
Electric Lighting, Power, Railway, Transmission,  
Hydro-Electric and Industrial  
Properties.  
327 South LaSalle Street, CHICAGO

**L. SCOTT TWOGOOD**
*Civil and Sanitary Engineer.*

 Steel and Reinforced Concrete Structures, Buildings,  
Bridges, Industrial Plants, Viaducts,  
Water Supply, Water Purification, Sewerage Systems,  
Sewage Disposal, Municipal Improvements.  
1514-15 Bank of Commerce Bldg. MEMPHIS, TENN

**F. ERNEST BRACKETT**
*Civil and Mining Engineer*

 Coal Mines, Water Works, Sewerage,  
Industrial Plants, Surveys and Reports.  
Clark-Kesting Bldg. CUMBERLAND, MD.

**FREELAND-KLYCE ENG'G CO.**
*Consulting Engineers*

 Concrete and Steel Structures  
NASHVILLE, TENN.

**HEDRICK & HEDRICK**
*Consulting Engineers*

 Bridges, Viaducts and other Structures of  
Steel and Reinforced Concrete.  
Interstate Building KANSAS CITY, MO.

**E. ELFORD**
*Contractor and Engineer*

 Reinforced Concrete Construction  
620 Commercial Building COLUMBUS, OHIO

**THE DABNEY ENGINEERING CO.**
*Water Works, Sewers, Roads, Drainage, Electric  
Lighting Systems. Plans, Estimates, Reports.*

376 Randolph Bldg. MEMPHIS, TENN.

**C. E. SHEARER**

Structural Consulting Engineer Industrial

 Est. March, 1910  
788 Randolph Bldg. MEMPHIS, TENN.



# **DIRECTORY**

## **ARCHITECTS                      ENGINEERS                      CONTRACTORS**

Detailed classification of specialized work undertaken by those  
having cards in this Directory will be found in Classified Index.

### **Ford, Bacon & Davis, Engineers.**

115 Broadway, New York

New Orleans

San Francisco

### **J. E. SIRRINE**

*Mill Architect and Engineer*

SPECIALTY:

Textile Mills and Water Power Developments

GREENVILLE, S. C.

### **CRAM ENGINEERING CO., Inc.**

*Engineers*

CONSTRUCT    MANAGE    FINANCE.  
Industrial Properties and Public Utilities.  
Reports            Valuations            Estimates.

Garrett Building

BALTIMORE, MD.



### **STONE & WEBSTER**

Industrial Plants and Buildings, Steam Power Stations, Water Power Developments,  
Transmission Lines, Gas Plants, Electric and Steam Railroad Work, Substations.

NEW YORK

BOSTON

CHICAGO

B. S. SNOWDEN

### **SNOWDEN & HAUSER**

G. E. HAUSER

*Civil and Consulting Engineers*

Specialists in Highway, Municipal, Drainage and Sanitary Engineering.  
Surveys, Designs, Estimates of Cost, Reports, Supervision and Inspection.  
COLUMBUS, MISS.

### **THE J. G. WHITE COMPANIES**

*Engineers—Contractors—Financiers—Managers*

43 EXCHANGE PLACE, NEW YORK

London

San Francisco

Chicago

### **TUCKER & LAXTON**

*Contracting Engineers*

Filters, Concrete Work, Hydro-Electric and Steam Electric Construction

CHARLOTTE, NORTH CAROLINA



### **GRAVES ENGINEERING CO., Inc.**

*Engineers and Operators*

Industrial Properties and Public Utilities

25 Pine Street

NEW YORK

### **HUNT ENGINEERING CO.**

Designing, Constructing and Operating Engineers and Contractors

*Experts in Portland Cement Engineering*

Examinations and Reports Made

513-517 Republic Building

KANSAS CITY, MO.

### **KELLY, COOKE & CO.**

*Engineers*

Design and Supervision of Construction  
Operation, Reports, Appraisals, Rate Developments  
Public Utilities — Industrial Plants — Municipalities  
PHILADELPHIA, PA.

### **SANDERSON & PORTER**

*Engineers*

CHICAGO

72 West Adams St.

NEW YORK

52 William Street

SAN FRANCISCO

Nevada Bank Bldg.

### **R. K. STEWART & SON**

*General Contractors*

Concrete Construction, Waterworks, Buildings.

SOUTH BOSTON, VA.

### **SAVANNAH ENGINEERING AND CONSTRUCTION CO.**

*Engineers and Contractors*

SAVANNAH, GEORGIA

Specialty Design and Construction of REINFORCED CONCRETE WORK

### **H. M. BYLLESBY & COMPANY**

*Engineers and Managers*

Purchase, Finance, Design, Construct and Operate Electric Light, Gas,  
Street Railway and Water Power Properties. Utility Securities Bought  
and Sold. Examinations and Reports.

NEW YORK  
Trinity Bldg.

CHICAGO  
Continental & Commercial Bank Bldg.

TACOMA  
WASHINGTON

### **FRANCIS R. WELLER, M. Am. Soc. C. E.**

*Consulting Engineer*

Hydro-Electric and Steam Power Plants, Reports, Appraisals, Designs,  
Construction, Properties Operated

Hibbs Building,

WASHINGTON, D. C.

### **SCOFIELD ENGINEERING COMPANY**

*Consulting, Designing and Supervising Engineers*

TEXTILE—MECHANICAL—ELECTRICAL—CIVIL

Commercial Trust Building

PHILADELPHIA

### **ARCHITECTS**

### **ENGINEERS**

Your card on these pages will place you directly before the  
active forces of the South and Southwest.

### **ALLEN-SCALES ENGINEERING COMPANY**

*Engineers and Contractors*

Water Works

Heating and Ventilation

Power Plants

209 Church Street

NASHVILLE, TENN.

### **THE J. B. McCRARY COMPANY**

*Engineers*

ATLANTA, GEORGIA

### **MUNICIPAL IMPROVEMENTS**

Southern work only. Have built over half of the Water, Light and Sewer  
Systems in Georgia and Alabama. We Design — Finance — Superintend.  
Bonds Purchased.

# DIRECTORY

## ARCHITECTS      ENGINEERS      CONTRACTORS

Detailed classification of specialized work undertaken by those  
having cards in this Directory will be found in Classified Index.

**MILBURN, HEISTER & CO.**
*Architects*

WASHINGTON, D. C.

**THE ARNOLD COMPANY**
*Engineers—Constructors*  
*Electrical—Civil—Mechanical*

 105 South La Salle St.  
 111 Broadway

 CHICAGO  
 NEW YORK

**A. LANGSTAFF JOHNSTON, Jr., M. E., E. E.**  
 Mutual Building      RICHMOND, VA.  
 Southern Associate of  
**MOSES, POPE & MESSER, Inc.**  
*Consulting Engineers*  
 Mech., Elect., Civil, Chemical and Industrial  
 366 Fifth Avenue      NEW YORK  
**HENRY WELLES DURHAM, C. E.**  
 Associated Highway and Municipal Engineer.

**DOW & SMITH**
*Chemical Engineers      Consulting Paving Engineers*  
 A. W. Dow, Ph.B.      F. P. Smith, Ph.B.  
 Mem. Am. Inst. Ch. Engrs.  
 Mem. Am. Soc. Civ. Engrs.  
 Asphalt, Bitumens, Paving, Hydraulic Cement,  
 Engineering Materials  
 181-3 E. 23d Street      NEW YORK

Government Landscape Architect—1910-1916.

**GEORGE BURNAP**  
*Landscape Architect*  
 Washington, D. C.

PARKS      SUBDIVISIONS      ESTATES

**DAY & ZIMMERMANN, Inc.**
*Engineers*

 Layout, Design, Construction, Valuation  
 and Examination of Industrial Plants and  
 Public Service Properties. Management  
 of Public Service properties.

611 Chestnut Street      PHILADELPHIA

**WINTERS & DOVE**
*Civil and Hydraulic Engineers*

 Water Works, Water Filtration, Sewers, Sewage  
 Disposal, Pavements and Roads.  
 Surveys, Plans, Specifications, Estimates, Reports  
 and Appraisals.

 311-312 Merchants Nat'l Bank Bldg.  
 FORT SMITH, ARK.

**GILBERT C. WHITE, C. E.**

 M. Am. Soc. C. E.  
 M. Am. W. W. Assoc.

*Consulting Engineer*

 Water Works      Streets  
 DURHAM, N. C.

**LOUIS G. CARLISLE**
*Architect*

VICKSBURG, MISS.

**HUGH L. COOPER & CO.**
*General Hydraulic Engineering*

 Including the Design, Financing, Construction  
 and Management of Hydro-Electric  
 Power Plants.

101 Park Avenue      NEW YORK

**CLARK & KREBS**

 J. M. CLARK, Mem. A. I. M. E.  
 C. E. KREBS, Mem. A. I. M. E.  
 G. R. KREBS      J. W. MORGAN  
*Civil and Mining Engineers and Geologists*  
 Coal, Oil and Gas  
 Railroad and Municipal Engineering  
 CHARLESTON, W. VA.

**MORSE, HALL & COCKEY**
*Consulting Engineers*

 ROBERT B. MORSE      HARRY R. HALL  
 M. Am. Soc. C. E.      Assoc. M. Am. Soc. C. E.  
 VINTON D. COCKEY  
 Specialties—Water Supply and Sewerage,  
 Typhoid Fever Investigations, Landscape  
 Developments, Roads and Paving.  
 324 N. Charles St.      BALTIMORE, MD.

**WILLIAM A. STANTON**
*Architect and Structural Engineer*

 All Classes of Concrete and Steel Construction.  
 308 First Nat. Bank Bldg.  
 VICKSBURG, MISS.

**W. E. MOORE & COMPANY**
*Engineers*

 Reports, Designs, Supervision, Public  
 Service Properties. Power Developments,  
 Distribution and Application.

Union Bank Building      PITTSBURGH, PA.

**WILLIAM SPEED**
*Civil Engineer and Landscape Architect*

 Chief Engineer Louisville-Nashville  
 Division Dixie Highway.

Starks Building      LOUISVILLE, KY

D. F. MORTON

G. G. WHITE

**MORTON & WHITE**
*Architects and Engineers*

JOHNSON CITY, TENN.

**BROWN & CLARKSON**
*Civil and Mining Engineers*

 Comprehensive Town Planning, Land Subdivision,  
 Traffic Problems, Road and Street Systems.  
 Precise Surveys, Triangulation, Typographic Property,  
 Geological Surveys for Oil and Mine Development.  
 Oxford Bldg., 14th St. and N. Y. Ave.  
 WASHINGTON, D. C.

 W. M. GARDNER,      H. N. HOWE  
 Mem. Am. Soc. C. E.      Assoc. Mem. A. M. Soc. C. E.

**GARDNER & HOWE**
*Engineers*

 Designs, Estimates and Supervision;  
 Concrete Bridges, Viaducts, Buildings,  
 and other Structures.  
 Porter Building      MEMPHIS, TENN.

**EDWIN WORTHAM, E. E.**
*Consulting Engineer*

 Industrial Plants, Factories, Municipal Work  
 of all kinds, Steam and Electric Railways,  
 Public Utilities, Reports, Valuations, Supervi-  
 sion, Franchises Drawn, Properties Operated.  
 Suite 47, Allison Bldg.      RICHMOND, VA.

**GALVESTON BLUE PRINT & SUPPLY CO.**
*Architects and Engineers' Supplies.*

 Continuous Blue Printing Machinery.  
 Prompt Service.  
 GALVESTON, TEXAS

**FREDERICK H. LEWIS**
*Civil and Mechanical Engineer*

 Plans, Specifications and Supervision  
 for Industrial and Electric Plants.

732 Brown-Marx Bldg      BIRMINGHAM, ALA.

**C. L. BROOKS ENGINEERING CO.**
*Packing-House and Cold-Storage Engineers.*

 We help you raise the capital, build the  
 plant and run it successfully. We make  
 a specialty of Southern plants.  
 Main Office—MOULTRIE, GA.  
 MINNEAPOLIS, MINN.      ATLANTA, GA.  
 736 Plymouth Bldg.      711 Empire Bldg.

**WALTER G. FRANZ**

Mem. A. S. M. E.      Assoc. A. I. E. E.

*Consulting Engineer*

 Designing and Superintending of Mechan-  
 ical, Electrical and Sanitary Work.  
 Union Trust Bldg.      CINCINNATI, OHIO

**DANIEL B. LUTEN**
*Designing and Consulting Engineer*  
 Reinforced Concrete Bridges exclusively.  
 Associate Engineers in each State.

INDIANAPOLIS, IND.

**GEO. F. WESTON**

Member Am. Society Agricultural Engineers

 Preliminary Reports and Operating Plans for  
 SOUTHERN AGRICULTURAL DEVELOPMENTS  
 Soils, Drainage, Livestock and Cropping  
 Twenty-seventh Year  
 36 East 23rd Street      NEW YORK, N. Y.

**WILLARD, BOGGS & CO.**
*General Contractors*

 Water Power Development Railroad Con-  
 struction. Buildings.

SPARTANBURG, S. C.

**CHARLES T. MAIN**

Member A. S. M. E.

*Textile Mills*

WATER POWER DEVELOPMENTS

201 Devonshire Street      BOSTON

**WILLIAM C. SPIKER, C. E.**

Mem. Am. Soc. Civ. Engrs.

*Consulting Engineer*

 Reinforced Concrete and Structural Steel  
 Buildings and Bridges.  
 1408-9 Candler Bldg.      ATLANTA, GA.

**CLARENCE W. MARSH**
*Engineer*

 Industrial Developments.  
 Chemical and Electrochemical Plants.

101 Park Ave.      NEW YORK CITY

**KNIGHT & QUAYLE**
*Consulting Engineers*

 Water Works, Water Supply and Purification, Flood  
 Prevention, Sewerage and Sewage Disposal, Municipal  
 Sanitation and Wastes Utilization, Garbage Collection  
 and Reduction, Supervision and Operation of Sanitary  
 Works, Pumping Engine Efficiency Tests,  
 Chemical, Biological and Mechanical Analyses,  
 Reports, Valuations, Designs.  
 406 Times Building      CHATTANOOGA, TENN.

**C. W. HUMPHREY**
*Consulting Engineer*

 Designing—Financing—Construction—  
 Operation.  
 Electric Lighting, Power, Railway, Trans-  
 mission, Hydro-Electric and Industrial  
 Properties.

327 South LaSalle Street,      CHICAGO

**L. SCOTT TWOGOOD**
*Civil and Sanitary Engineer.*

 Steel and Reinforced Concrete Structures, Build-  
 ings, Bridges, Industrial Plants, Viaducts,  
 Water Supply, Water Purification, Sewerage Sys-  
 tems, Sewage Disposal, Municipal Improvements.

1514-15 Bank of Commerce Bldg.      MEMPHIS, TENN.

**F. ERNEST BRACKETT**
*Civil and Mining Engineer*

 Coal Mines, Water Works, Sewerage,  
 Industrial Plants, Surveys and Reports.  
 Clark-Keating Bldg.      CUMBERLAND, MD.

**FREELAND-KLYCE ENG'G CO.**
*Consulting Engineers*

 Concrete and Steel Structures  
 NASHVILLE, TENN.

**HEDRICK & HEDRICK**
*Consulting Engineers*

 Bridges, Viaducts and other Structures of  
 Steel and Reinforced Concrete.  
 Interstate Building      KANSAS CITY, MO.

**E. ELFORD**
*Contractor and Engineer*

 Reinforced Concrete Construction  
 620 Commercial Building      COLUMBUS, OHIO

**THE DABNEY ENGINEERING CO.**

 Water Works, Sewers, Roads, Drainage, Electric  
 Lighting Systems. Plans, Estimates, Reports.  
 376 Randolph Bldg.      MEMPHIS, TENN.

**C. E. SHEARER**

Structural      Consulting Engineer      Industrial

Est. March, 1919      MEMPHIS, TENN.

**Architects      Engineers**  
**Contractors**

Your card on these pages  
 will place you directly be-  
 fore the active forces of  
 the South and Southwest.



# DIRECTORY

## ARCHITECTS

## ENGINEERS

## CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

### Ford, Bacon & Davis, Engineers.

115 Broadway, New York

New Orleans

San Francisco

### J. E. SIRRINE

Mill Architect and Engineer

SPECIALTY:

Textile Mills and Water Power Developments

GREENVILLE, S. C.

### CRAM ENGINEERING CO., Inc.

Engineers

CONSTRUCT MANAGE FINANCE.  
Industrial Properties and Public Utilities.  
Reports Valuations Estimates.

Garrett Building

BALTIMORE, MD.



### STONE & WEBSTER

Industrial Plants and Buildings, Steam Power Stations, Water Power Developments, Transmission Lines, Gas Plants, Electric and Steam Railroad Work, Substations.

NEW YORK

BOSTON

CHICAGO

B. S. SNOWDEN

### SNOWDEN & HAUSER

G. E. HAUSER

Civil and Consulting Engineers

Specialists in Highway, Municipal, Drainage and Sanitary Engineering. Surveys, Designs, Estimates of Cost, Reports, Supervision and Inspection.

COLUMBUS, MISS.

### THE J. G. WHITE COMPANIES

Engineers—Contractors—Financiers—Managers

43 EXCHANGE PLACE, NEW YORK

London

San Francisco

Chicago

### TUCKER & LAXTON

Contracting Engineers

Filters, Concrete Work, Hydro-Electric and Steam Electric Construction

CHARLOTTE, NORTH CAROLINA



### GRAVES ENGINEERING CO., Inc.

Engineers and Operators

Industrial Properties and Public Utilities

25 Pine Street

NEW YORK

### HUNT ENGINEERING CO.

Designing, Constructing and Operating Engineers and Contractors

Experts in Portland Cement Engineering

Examinations and Reports Made

513-517 Republic Building

KANSAS CITY, MO.

### KELLY, COOKE & CO.

Engineers

Design and Supervision of Construction  
Operation, Reports, Appraisals, Rate Developments  
Public Utilities — Industrial Plants — Municipalities

PHILADELPHIA, PA.

### SANDERSON & PORTER

Engineers

CHICAGO

72 West Adams St.

NEW YORK

52 William Street

SAN FRANCISCO

Nevada Bank Bldg.

### R. K. STEWART & SON

General Contractors

Concrete Construction, Waterworks, Buildings.

SOUTH BOSTON, VA.

### SAVANNAH ENGINEERING AND CONSTRUCTION CO.

Engineers and Contractors

SAVANNAH, GEORGIA

Specialty Design and Construction of

REINFORCED CONCRETE WORK

### H. M. BYLLESBY & COMPANY

Engineers and Managers

Purchase, Finance, Design, Construct and Operate Electric Light, Gas, Street Railway and Water Power Properties. Utility Securities Bought and Sold. Examinations and Reports.

NEW YORK  
Trinity Bldg.

CHICAGO  
Continental & Commercial Bank Bldg.

TACOMA  
WASHINGTON

### FRANCIS R. WELLER, M. Am. Soc. C. E.

Consulting Engineer

Hydro-Electric and Steam Power Plants, Reports, Appraisals, Designs, Construction, Properties Operated

Hibbs Building,

WASHINGTON, D. C.

### SCOFIELD ENGINEERING COMPANY

Consulting, Designing and Supervising Engineers

TEXTILE—MECHANICAL—ELECTRICAL—CIVIL

Commercial Trust Building

PHILADELPHIA

### ARCHITECTS

### ENGINEERS

Your card on these pages will place you directly before the active forces of the South and Southwest.

### ALLEN-SCALES ENGINEERING COMPANY

Engineers and Contractors

Water Works

209 Church Street

Heating and Ventilation

Power Plants

NASHVILLE, TENN.

### THE J. B. McCRARY COMPANY

Engineers

ATLANTA, GEORGIA

### MUNICIPAL IMPROVEMENTS

Southern work only. Have built over half of the Water, Light and Sewer Systems in Georgia and Alabama. We Design — Finance — Superintend. Bonds Purchased.

## DIRECTORY

### ARCHITECTS

### ENGINEERS

### CONTRACTORS

Detailed classification of specialized work undertaken by those  
having cards in this Directory will be found in Classified Index.

#### THE S. R. SMYTHE COMPANY

*Engineers* PITTSBURGH, PA. *Contractors*

Steel Works, Rolling Mills, Blast Furnaces, Hot Blast Stoves, Furnaces for All  
Purposes, Operated with Producer Gas, Natural Gas, Oil or Pulverized Coal.  
Coke Ovens, Gas Producers, Hand Operated or Mechanical.  
*The Value of the Era.* SCHILD SLIDING GAS AND AIR REVERSING VALVES.

#### HOWARD M. GASSMAN

Mem. Am. Soc. M. E. *Consulting Engineer* Mem. Am. Inst. E. E.

EQUIPPING MILLS AND MINES WITH POWER.  
REPORTS ON AND DESIGNING OF MANUFACTURING AND  
POWER PLANTS.

Brown-Marx Building BIRMINGHAM, ALABAMA.

#### ARTHUR G. McKEE & CO.

*Engineers and Contractors*

Power Plants, Industrial Buildings, Metallurgical Plants, Blast Furnaces,  
Storage Bins, Coal-Handling Equipment.

Design—Construction CLEVELAND, OHIO.

#### HENRY J. COX AND COMPANY

Assoc. Mem. Am. Soc. C. E.

*Engineers and Contractors*

Railroads, Highways, Drainage and Levees.

ALEXANDRIA LOUISIANA

#### BLODGETT CONSTRUCTION COMPANY

*Contracting Engineers*

Steel, Wooden and Concrete Bridges, Pneumatic and Open Sinking  
Railroad Construction and Steam Shovel Work

KANSAS CITY, MO. SHREVEPORT, LA. MONTGOMERY, ALA.

#### C. W. LANE & CO., Inc.

*General Contractors*

Steam and Electric Railroads, Water Powers Developed.  
City Water-Works, Sanitary Sewers, Street Paving, Concrete Buildings.  
General Offices, Healey Building ATLANTA, GA.

#### TIMBER FACTORS AND ESTIMATORS

SANBORN & GERHART

International Timber Lands Investigation a Specialty.

American National Bank Bldg. ASHEVILLE, N. C.

#### THE WEST CONSTRUCTION CO.

*Street Paving Contractors*

CHATTANOOGA, TENN.

JOHN W. MOORE

OTTO N. MOORE

#### MOORE BROTHERS

*Consulting Engineers*

Machine Design, Pumping Systems and Construction for large users of water.  
Our facilities for Machine Construction are ideal.

3745 E. Washington Street INDIANAPOLIS, IND.



#### SPRAY ENGINEERING COMPANY

*Engineers*

*Manufacturers*

For Spray Cooling Ponds, Irrigation  
Systems, Aerating Reservoirs, Odor  
Condensers, Gas Washers.

93 Federal Street

Of Air Washers, Spray Nozzles,  
Aerating Nozzles, Asphalt Nozzles,  
Park Sprinklers.

BOSTON, MASS.



We test foundations for buildings, bridges and dams.  
We prospect coal and mineral lands in any part of  
North and South America.

#### WE LOOK INTO THE EARTH

By use of Diamond Core Drills

PENNSYLVANIA DRILLING COMPANY

2523 Whitehall Bldg., New York. 30 Carson St., Pittsburgh, Pa.  
Phone Rector 6998 Phone Hemlock 305.

## Architects

## Engineers

## Chemists

## Geologists

The unparalleled activity in every phase of industrial development of the  
Southern and Southwestern States is creating opportunities for technically  
trained men that are not surpassed by any section of America today.

Your card in the professional directory of the Manufacturers Record—  
for 35 years the leading exponent of Southern development—will keep  
your special line of work before the men who are in active charge of the  
South's industrial affairs.



# DIRECTORY CHEMISTS      GEOLOGISTS CHEMICAL ENGINEERS TESTING LABORATORIES

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

**SAMUEL P. SADTLER & SON**  
*Consulting and Research Chemists.*  
 Analyses and Reports made in all Branches of Industrial Chemistry. Raw Materials and Waste Products studied and reported upon. Experimental work.  
 Office and Laboratory, 210 S. 13th Street; Experimental Laboratory, Chestnut Hill,  
 PHILADELPHIA, PA.

L. T. Emory, C. E.      R. H. Eisenbrey, Chem. E.  
**EMORY & EISENBREY**  
*Civil, Chemical and Industrial Engineers*  
 Designs of Industrial Plants, Modernizing, Investigations and Reports on Manufacturing and Mining Operations. Specialists on Feldspar, Talc, Silica, Kaolin, Bauxite, and similar minerals.  
 PHILADELPHIA,      PENNSYLVANIA

**FROEHLING & ROBERTSON**  
*Richmond Testing Laboratory*  
*Chemists and Economic Geologists*  
 Analyses of all kinds. Waters and fertilizers specialties. Standard Cement Testing Examinations and reports on mineral properties.  
 613 East Franklin St.      RICHMOND, VA.

**D. C. PICARD, B. Sc. M. A.**  
 (Formerly President the Picard-Law Co., Atlanta, Ga.)  
*Analytical and Consulting Chemist.*  
 Industrial Problems. Municipal Sanitary Work and Testing of Municipal Supplies. Analysis of Foods, Cottonseed Products, Fertilizers, Minerals, Fuel and Water—Chemical and Bacteriological.  
 Potter Building      BIRMINGHAM, ALA.

**WILEY & COMPANY**  
*Analytical and Consulting Chemists*  
 Experts on Fertilizer Materials, Coal, Greases, Foods, Drugs, Dairy Products, Chemical and Bacteriological Examination of Water for Domestic and Manufacturing Purposes.  
 78 Gay Street      BALTIMORE, MD.

**LUDWIG A. THIELE, Ph.D.**  
*Chemical Engineer*  
 Mem. Am. I. Ch. E.  
 Design and Construction of Chemical Plants, Sulphuric Acid Plants (Multiple-tangent System), Fertilizer Plants, Extraction Plants (volatile solvents), Supervision, Installation of Plants, Processes and Proprieties.  
 Hartman Bldg.      COLUMBUS, OHIO

**PITTSBURGH TESTING LABORATORY**  
*General Inspection*  
 Specialties—Cement and Road Materials, Cast Iron Pipe, Chemical and Physical Tests.  
 CINCINNATI      BIRMINGHAM      DALLAS  
 CHICAGO      PITTSBURGH      NEW YORK

Robert W. Hunt      Jno. J. Cone  
 Jas. C. Hallsted      D. W. McNaugher  
**ROBERT W. HUNT & CO.**  
*Engineers*  
 Inspection and Tests. Steel and Cement for Bridges and Buildings. Railroad Material and Equipment. Chemical, Physical and Cement Laboratories.  
 Chicago      New York      Pittsburgh      St. Louis  
 Dallas      New Orleans      Los Angeles      San Francisco

**MINES EFFICIENCY CO.**  
*Geological, Mining and Metallurgical Engineering.*  
 Examination and Exploration of Mineral Properties. Design and Erection of Concentration Plants. Management and Iron Ore Problems a Specialty.  
 710 Alwerth Bldg.,  
 129 Broadway      DULUTH, MINN.  
 NEW YORK CITY

**THE DORR COMPANY**  
*Metallurgical and Industrial Engineers*  
 Research, consultation and design of plants in connection with Chemical and Hydrometallurgical processes, prevention of stream pollution, trade waste treatment, etc.  
 17 Battery Place  
 DENVER      NEW YORK      LONDON

**GEORGE C. DAVIS**  
*Analytical and Consulting Chemist*  
 Analyses of Iron, Steel, Ores, Alloys, Coal, Sand, Clay and Cement.  
 18 South Tenth St.      PHILADELPHIA, PA.

**RICHARD K. MEADE**  
 Mem. A. M. S. M. E.      Mem. Am. I. Ch. E.  
*Chemical, Mechanical and Industrial Engineer*  
 Chemical, Cement, Lime and Fertilizer Plants Designed and Improved. Reports on Industrial Propositions. Technical Research. Analyses, Tests and Inspection of Engineering Materials.  
 Law Building      BALTIMORE, MD.

**BURGESS & LONG**  
*Chemical Engineers & Analytical Chemists.*  
 General Chemical Analyses.  
 Recovery and Disposal of Manufactural Wastes and By-Products.  
 Technical Control of Manufacturing Industries.  
 Consultations as to Processes, Products, etc.  
 8 E. Long Street      COLUMBUS, OHIO

**OHIO TESTING LABORATORY**  
*Analytical and Consulting Chemists. Technological and Legal Experts.*  
 Chamber of Commerce Building      COLUMBUS, OHIO

FOUNDED 1910  
**THE INSTITUTE OF INDUSTRIAL RESEARCH**  
 (INCORPORATED)  
 Chemical and Engineering Laboratories  
*Consulting Chemists and Chemical Engineers*  
 Plant Design and Construction      WASHINGTON, D. C.

**A. H. NEY, Inc.**  
*Consulting Chemists and Engineers*  
 Experts in Coal Tar Products  
 50 Church Street      NEW YORK

**ARTHUR D. LITTLE, Inc.**  
 ESTABLISHED 1886

The oldest, largest and best equipped organization of Chemists and Engineers in the country for the investigation of conditions affecting the efficiency and economy of industrial operations.

93 Broad Street      BOSTON

## INDUSTRIAL NEWS OF INTEREST

### Contract Awarded.

The Tennessee Coal, Iron & Railroad Company of Birmingham, Ala., has awarded a contract to the Roberts & Schaefer Company, engineers and contractors, McCormick Building, Chicago, for a Marcus patent picking table screen equipment to be installed in a new steel tippie at Bay View, Ala. This in addition to six other contracts in different parts of the country.

### Heating and Ventilating Contracts.

The Hammond Heating Company, 130-132 East Pearl St., Cincinnati, heating and ventilating engineers, is conducting business in the South and among its contracts it has recently engaged upon the work of heating and ventilating schools at Big Stone Gap, Va., and Lebanon, Va., with its fan-furnace system. The company controls the well-known Peck-Hammond Co. furnaces. Laurence W. Hammond is Pres. and Treas.; H. A. Barrett, V.-P., and L. M. Hammond, Secy.

### Fire Brick Plant Purchased.

The Jackson Fire Brick Co., Jackson, Tenn., announces that it has purchased outright the Hunt Pressed Brick Co., successors to the Southern Tile & Brick Works of Jackson, the deal including a modern fire brick plant, the good will and the well-known "Jaxon" brands of fire brick, these comprising the "Standard," "Export," "Crown" and "Mix" types of this brick. All of the clays used in the manufacture of the brick come from the company's own mines.

### Financing Industrial Propositions.

The Gelger-Jones Company, underwriters of industrial securities, of Canton, O., have recently opened a Southern office at 1810 Candler Bldg., Atlanta, Ga. Fred B. Wilson, who for the last decade has been associated in the handling of various industrial promotions, is in charge of the office. Southern

business men will, through this office, have a better opportunity to invest in the securities already listed by this concern, and at the same time it will finance good Southern propositions when the opportunities present themselves.

### Independent Pneumatic Tool Co.

John D. Hurley, formerly vice-president, has been elected president of the Independent Pneumatic Tool Co. of Chicago, to succeed the late James Buchanan Brady; Ralph S. Cooper was then elected vice-president, and Robert T. Scott has been elected a director and a member of the executive committee. In referring to these changes last week in these columns the company was inadvertently mentioned as the Pneumatic Tool Co., hence this further notice of them. Mr. Cooper has been manager of the company's New York office for a number of years, and Mr. Scott is manager of the Pittsburgh branch.

### Illuminating the Capitol Dome.

Against the shadows of night the beautiful white dome of the Capitol at Washington, standing high above the city, is resplendent in rays of brilliant light. The plans for illuminating it were perfected for the recent inauguration of the President, and the results were so excellent that the system of lighting was made permanent. Flood lighting is the method employed and 84 form L-1 General Electric flood projectors, each equipped with a 400-watt Edison Mazda C. flood lighting lamp, are used. They are in four banks, each about 300 feet from the dome and on the corners of the Senate and House wings of the Capitol. On the wide concourse, which encloses the building on three sides, are 84 form L-3 General Electric flood lighting projectors mounted on ornamental posts which are placed on the parapet. All this illumination produces a beautiful effect.

### Wants to Establish Agencies.

The Clarage Fan Company, Kalamazoo, Mich., which is well known throughout the South because thousands of its fans have been sold in this section through manufacturers of gin equipment for use in elevating and conveying cotton in the typical cotton gin, is now interested in extending its market for the general line of fan and blower apparatus which it builds, and it announces that it is looking for representatives through the South to handle this line on a commission basis. The company's advertisement elsewhere in this issue will give an idea of the extent of its line of products, which will be appreciated by those having had experience or who handle similar material.

### Now Has Eight Engineers.

Guy Robert Ramsey, Assoc. M. Am. Soc. C. E., Orlando, Fla., has joined the engineering staff of the Dunn Wire-Cut Lug Brick Co. of Conneaut, Ohio, and will be division engineer for it in the Southern States, with headquarters at Atlanta, Ga. He is a graduate of Hobart College, Geneva, N. Y., and began his professional career with the Lehigh Valley Railway Co., later being connected with other prominent railroads including the Erie, the Western Maryland and the Chicago Milwaukee & St. Paul lines. About 12 years ago, for a three-year period, he was construction engineer for the Tennessee Coal, Iron & Railroad Co. He was next general manager for the Spokane Fire Brick Co., Spokane, Wash., and assistant city engineer there. Then he engaged in consulting engineering practice at Orlando and later was city engineer, also being highway engineer for Orange, Osceola and Seminole counties. The Dunn Company now has eight engineers on its regular staff.

The Copeland Inglis Shale Brick Co., of Birmingham, Ala., has become a licensee of the Dunn Wire-Cut Lug Brick Co. and will henceforth make wire-cut lug paving brick.

### Will Make "Bull Dog Grip" Shaft Couplings.

The Safety First Manufacturing Co. of Alexandria, Va., has been organized there for the manufacture of "Bull Dog Grip" shaft couplings with \$200,000 capital stock, the incorporators being Eldridge M. Jordan and Warner Moore of Richmond, Robert Roosevelt, Allerton S. Cushman and Marcus A. Jordan. The officers are Marcus A. Jordan, president; Allerton S. Cushman, vice-president, and B. B. Wilson, secretary and treasurer. Offices are in the Real Estate Trust Building, Washington, D. C., but the company's factory and warehouse is in Alexandria, where it has purchased the Pioneer Mill building, this being located on the river front at the foot of Duke street, where a large force of skilled mechanics will be employed. The building is large, substantial and well suited for manufacturing. The "Bull Dog Grip," it is claimed, insures perfect alignment and makes slipping an impossibility, besides there is absolute rigidity, this style of coupling making practically a continuous line of shafting. Moreover, it is readily attached, no tools whatever being required, and it is positively locked, making it hold the tighter. The company has many testimonials as to its many advantages.

### Ball Bearing Industries United.

In line with plans made last fall when New York interests, including the National City Bank and Brown Bros., bankers, previously interested in the S. K. F. Ball Bearing Co., acquired an interest in the Hess-Bright Manufacturing Co. of Philadelphia, it is announced that these two companies making ball bearings will now be administered by a recently formed New York corporation, The S. K. F. Administrative Co. at 1 Wall St. The directors are F. A. Vanderlip, Pres. of the National City Bank; Thatcher Brown of Brown Bros.; F. B. Kirkbride, S. Wingquist, Axel Carlinder, Marcus Wallenberg (a well-known banker of Sweden), and B. G. Prytz, Pres. of the S. K. F. Ball Bearing Co., who was active in uniting the two companies. He is now president of the Administrative Co. and also president of the Hess-Bright Co. Budd D. Gray, of the latter, having resigned to be Technical Adviser for the New York concern. The Administrative Co. is extending the manufacturing facilities of both the Philadelphia and the Hartford plants, the demand for the products being so far in excess of present output that additions are to be made notwithstanding the high cost of building. The union of the two companies was facilitated by the German minority interest of the Hess-Bright Co. being acquired shortly before the break with Germany.

(Continued on Page 94.)

# Classified Opportunities

## MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

**FOR SALE**—50,000 acres coal, fee, in Tennessee, on railroad, developed; three veins above water level, \$8.50 per acre. 2500 acres Virginia anthracite, on railroad, developed. Price \$150,000. 24,000 acres in Virginia, fee; railroad passes through property for 9 miles. Fine vein high-grade Oriskany iron ore, 10,000,000 ft. timber. Much fine agricultural land. Great bargain at \$100,000. Write for maps and description. Fine timber and iron-ore proposition for sale. Full information on request. Stras & Persinger, Inc., Roanoke, Va.

**FOR SALE**—700 acres on railroad adjoining town of 5000; textile mill site and town development or subdivision property; electric power; extensive pine frontage. Address Deak Aydelott, Tullahoma, Tenn.

**FOR SALE?** Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

**BIG PROPERTIES.**—80,000 acres, 200,000,000 feet L. L. pine timber, 20,000 acres prairie, Southern Florida; 20,000 acres coal, Southern Illinois; have merit. S. J. Burkitt, Mowqua, Ill.

**FOR SALE**—4 choice water-power sites near railway, with land at station for plants. Also mineral and timber. Address E. Carter, Livingston, Va.

**FELDSPAR** If you have or want them, write, and  
**KAOLIN.** S. F. Sherman, 62 Broadway, New York City.

### GRANITE

**FOR SALE**—20 acres exposed granite near Lithuania; good grade Georgia granite; \$3000. Address P. Box 43, Decatur, Ga.

### SULPHUR

**SULPHUR LAND.**  
Proven Sulphur Land for sale.  
Will sell in tracts to suit purchaser.  
J. A. Daniel & Company,  
Toyah, Texas.

### MANGANESE

**MANGANESE ORE PROPERTY**, consisting of 200 acres, thoroughly prospected. Many bore holes prove large vein and vast quantity of ore. The property is now being worked in a crude way and the operator is making large profits. This property is close to railroad and justifies scientific development. The owner of this property authorizes us for a short while to offer it at a very low figure. P. A. Green & Co., 713 Mutual Bldg., Richmond, Va.

### COAL MINE AND LEASES

**FOR SALE**—Small coal mine in operation New River field. Also two leases which can be quickly developed. Coal can be mined at a large profit. For particulars address Box 230, Hinton, W. Va.

### COAL LANDS

**FOR SALE**—6000 acres W. Va. coal. Two railroads and slackwater; 2 merchantable seams; numerous openings at outcrop; solid block; economical operation. Price low. Write today. R. M. Parrish, Grafton, W. Va.

**FOR LEASE**—Hazard, Ky., coal field, 2400 acres for lease, all or part. Address Edgerton Coal Corporation, Abingdon, Va.

### TIMBER LAND

**100 MILLION FEET VIRGIN TIMBER.**  
LONG-LEAF PINE.  
Twelve thousand acres in Escambia County, Alabama, near L. & N. R. R., mostly unbled long-leaf timber; will cut about 100 million feet.

Thirteen thousand acres in Covington County, Alabama, on Alabama, Florida & Gulf R. R.; will cut about 60 million feet. Let us furnish further particulars.  
Southern Realty Co., Mobile, Ala.

**1760 ACRES VIRGIN TIMBER**, eight miles from railroad. Long-leaf pine, extra fine quality; also best grade of white oak. All the land can be utilized as farm or stock ranch. Greatest abundance of water; convenient to schools. Will cut 3000 to 8000 feet per acre. \$15 per acre in fee. Box 176, Heber Springs, Arkansas. Heber Springs Development Company.

**174,000 ACRES MICHIGAN TIMBER.**—Well located. Railroads through property. Will cut 8000 feet pine, oak, cedar, spruce, etc., per acre. Priced for quick sale, \$4,000,000; one-half cash. Kopp Land Co., Kewanee, Ill.

**TIMBER LANDS** for sale in Arkansas and Louisiana, in all size tracts, principally hardwood timber. If you are in market for first-class virgin timber lands, write us. Hudson Real Estate Co., Cabot, Ark.

**FOR SALE**—3300 acres of hardwood timber, estimated to cut six million feet, two miles from railroad and bordering on Alabama River; twenty-year lease. For particulars address Box 63, Glennville, Ga.

## RATES AND CONDITIONS

Rate 25 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 23c. per line; 300 lines, 21c. per line; 500 lines or more, 20c. per line.

### TIMBER LAND

#### FINE VIRGIN TIMBER.

4000 acres, navigable stream, 3 miles to Ry.; well bodied, fine, smooth sticks; easy logging, no bogs; 5/8 fine virgin short-leaf pine, balance mostly red and white oak; good mill site. \$50,000 takes the timber if sold at once. Will cut over 20 million feet. Walter E. Barnes, 312 S. 41st St., B'ham, Ala.

**FOR SALE**—57,000 acres turpentine pine timber land in the celebrated Sanford, Florida, celery section, on Florida East Coast Ry. \$5.50 per acre, half cash. Address P. O. Box 43, Decatur, Ga.

### TIMBER

**TIMBER BARGAIN.**—50,000,000 ft. original growth, 60% N. C. pine, 8% cypress, 8% poplar, balance red gum, etc., on Southern Rwy. in South Carolina. Large amount of additional, contiguous, similar stumpage can be bought cheap. For particulars write J. P. Mulherin, Augusta, Ga.

**STANDING TIMBER FOR SALE.**—Four million (estimate) ft. very fine oak, pine and swamp cypress on Mattaponi River, Va.; lot of it suitable for piling. Address Palmer & English, Richmond, Va.

**FOR SALE**—About three hundred and seventy-five million feet of the highest grade and quality of virgin long-leaf yellow pine. For particulars address H. H. Wefel, Jr., Mobile, Alabama.

**15 MILLION FEET** fine ship timber in Eastern Virginia; about half yellow pine, balance oak and hickory, all virgin growth. Green & Redd, Richmond, Va.

### CUTOVER LAND

**CLIENT** must sacrifice tract of four thousand acres in one body; uncleared, but cut over once; still has valuable timber, especially for ties; two miles one railroad, five miles another; station near; river twelve miles. Titles perfect. A bargain for immediate action. North Alabama Abstract Company, Tusculum, Alabama.

### FARM AND TIMBER LANDS

**WE OWN LARGE TRACTS OF TIMBER LANDS**, cut-over lands and colonizing lands. If interested, address H. H. Wefel, Jr., & Co., Mobile, Alabama.

### STOCK FARMS

**FOR SALE.**—Ten thousand acres especially well adapted for a ranch, located South Alabama. If buyer stock ranch, would require no payment for three or four years. Address H. H. Wefel, Jr., Owner, Mobile, Ala.

### FARM AND GRAZING LANDS

**WE HAVE FOR SALE** 328 farms in Piedmont Virginia and Northern Maryland, ranging in price from \$1000 to \$100,000, many of which are in a high state of cultivation, for general farming, grazing, orcharding and dairying. W. W. Briggs & Son, Orange, Va.

### CUT-OVER LAND

#### BARGAINS.

#### CUT-OVER LANDS

#### IN MISSISSIPPI AND ALABAMA.

Eighteen thousand acres in Mississippi, N. O. & N. E. R. R. on east and Pearl River on west side, within fifty miles of New Orleans. Splendidly situated for colonization project, being in close proximity to steady market. Soil chiefly sandy loam with clay subsoil adapted to farming, trucking, orange growing, stock raising, etc. Plenty of native grasses, and can be cleared for farming at very moderate expense. \$6 per acre.

**THIRTY THOUSAND ACRES** in Alabama, on Southern Railroad, within seventy-five miles of Mobile, partly overlying supposed oil belt, admirably suited for stock raising, ranch, farming, etc. \$6 per acre. Write for particulars. Southern Realty Co., Mobile, Ala.

### COUNTRY HOME

#### FOR SALE OR EXCHANGE.

Magnificent modern country home, 10 acres, 15 rooms, gas, electricity, sewerage, fine water supply, 3 bathrooms, hot-water heat, servants' quarters, individual phones, garage, stable, barn, chicken-houses, in first-class condition. Garden, asparagus, strawberry beds, young orchard, all fruits, flower beds, beautiful shade. Overlooking Washington, 30 minutes U. S. Treasury by electric cars, 15 minutes auto, 10 minutes steamroad. Price \$30,000; terms if desired. O. B. Zantlinger, Washington, D. C.

### SUBURBAN ACREAGE

**SUBURBAN ACREAGE.**—In the high-class restricted section adjoining the city of Tampa; this property is now ripe for a high-class restricted subdivision; has large and excellent bay frontage; is within four miles of the business center of Tampa, with new interurban line to be built through entire tract and near golf links. For information write Hammond-Weaver Co., Giddens Bldg., Tampa, Fla.

## FRUIT, FARM AND TRUCK LANDS

**THESE COLUMNS ARE CLOSELY READ BY PEOPLE** for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

### FLORIDA

### FOR SALE

6560 ACRES IN FLORIDA.

WHOLESALE PRICE.  
WILL NOT RETAIL.

Located on the East Coast, in Volusia county; price \$6.50 per acre; \$1 per acre down, balance \$1 per acre per year, 6 per cent. interest on deferred payments; 8 miles west of New Smyrna, Fla.; on the Orange City branch of the Florida East Coast R. R.; Indian Springs Station is only 1/4 of a mile from it; 2500 acres are "prairie land." Has an elevation of about 22 1/2 to 41 feet above the tidewater; top soil is a black sandy loam, underlaid with clay. Would make an ideal stock range. There are forty families farming in the adjoining sections; some have raised 45 to 50 bushels of corn to the acre, 50 barrels of Irish potatoes, and all kinds of garden truck, such as lettuce, beans, peas, Bermuda onions, besides good crops of rice, oats and grasses for feed. Title good. Owned in fee-simple, without incumbrance. Other information will be furnished upon request by E. C. Howe, 747 Hartford Bldg., Chicago, Ill.

**FLORIDA.**—Buy an orange and grapefruit grove. 20 acres finest soil, half in bearing grove, balance for vegetables, on macadam road, near county seat. Crop estimate for 1917, \$4000. Price, \$10,000, on terms. This property for a discriminating buyer. Also avocado land, beautiful bungalows and other properties. Finest winter climate. Bank references. C. C. Ausherman & Co., Ft. Lauderdale, Fla.

**FLORIDA.**—Do you intend visiting the land of health and sunshine this winter? If so, write M. J. Hoenig, Prop. Hotel Palms, West Palm Beach, Fla., for instructive booklet.

**FOR SALE.**—An established colony in Florida. Now is the time to get back to the soil. This is a bargain proposition. Good reason for selling. Address No. 3088, care Manufacturers Record, Balto., Md.

**PAPER-SHELL PECAN GROVES AT MONTICELLO.** the world's pecan center, planted and developed to order on easy payments, are the best savings investment obtainable. Salesmen wanted. Samuel I. Kidder, Monticello, Florida.

**FOR A SAFE** and permanent investment Florida lands and values should interest you. Manatee County is the best location, and is destined to become one of the most progressive settlements in the State and a very profitable investment. Florida farms in Manatee County are below frost belt; have rich soil, with 365 producing days. Easy terms. J. Henry Strohmeier, Maryland Casualty Tower Building, Baltimore, Md., and Sarasota, Florida.

**FREE "THE WINTER GARDEN OF AMERICA."** To Fruit Growers, Truckers, General Farmers, Cattle, Hog and Poultry Raisers. Folks interested in the great Indian River Section of Florida, write Indian River Farms Company, Suite O, 609 Putnam Bldg., Davenport, Iowa.

### GEORGIA

**1100 ACRES.**—Ideal for livestock and grain raising; located 9 miles southwest of Sandersville, the county-seat of Washington county, Ga., on the Tennille and Milledgeville public highway, a branch of the Dixie Highway from Chicago to Jacksonville, Fla. Tennille, the nearest shipping point, has four railroads, giving low freight rates and direct connections in every direction. Tennille is on the main line of the Central of Georgia R. R. from Atlanta to Savannah, and is the terminus of three other railroads; 1 1/2 miles from good school and 3 miles from church; 800 acres cleared, 400 acres of which has been stumped, 600 acres pasture, 200 acres woodland; light-gray loamy soil with stiff clay subsoil; buildings are: 1 1/2-room tenant-house, 6 2-room tenant-houses, 2 barns, 1 grain and hay barn, all in good condition; good water supply, wells, springs and branches; 50 acres fenced with rails and wire fencing; R. F. D. and phone line; fine branch which would develop 20 to 25 horsepower; natural drainage; 200,000 to 250,000 feet extra good mixed pine timber; property so lies on both sides of the public highway that it would make fine subdivision proposition; fine neighborhood of good people; well leased for 1917; complete possession, including lease, can be given purchaser at once; adjoining lands held at from \$25 to \$40 per acre; no exchange; unencumbered. Price \$12.50 per acre; terms, one-third cash, balance 1, 2, 3, 4 and 5 years at 8 per cent. per annum. Cannot be excelled for every kind of grain and every kind of livestock raising. H. D. Zapf Realty Co., Sandersville, Ga.

**FOR SALE.**—53 acres good trucking land, 8 miles Atlanta, near electric car line and Ga. R. R.; \$6500. Fletcher Pearson, 204 Trust Co. of Ga. Bldg., Atlanta, Ga.

### ILLINOIS

**A MILLION-DOLLAR FARM.**—Consisting of 10,000 acres corn land in Western Illinois, worth \$125 to \$150 per acre. All in cultivation. Present price, one million dollars; one-half cash. Kopp Land Co., Kewanee, Ill.

### NORTH CAROLINA

**I HAVE** for sale a farm containing fifteen hundred acres situated in Alamance Co., N. C., on Haw River, near Saxapahaw Cotton Mills; water-power on farm; dwellings and tenement-houses; good stock farm or farming. For information write or come to see me at Burlington, N. C. J. C. Staley, Trustee.

### SOUTH CAROLINA

**FOR SALE.**—Coosaw farms, 1250 acres. 50 under cultivation and open, balance in woods and marshes. Land very fertile. Now raising truck, cotton, corn and cattle. Will accommodate several families. Reasonable price, easy terms. May exchange for city realty. Write to Wm. Keyserling, Beaufort, S. C.

### TEXAS

**MONEY** can't be used to better advantage now than investing it in South Texas land. There is no speculation in it. You will know so a year from now. I give you here a few good buys: 2533 acres of fine agricultural land, located in a proven oil district; price \$10 per acre; terms, 1000 acres improved stock farm between Austin and San Antonio; 200 acres tillable land; one mile river front; across the river is constructed a solid dam of rock masonry, giving 35 to 40 horsepower, which operates a large turbine wheel, a gin, press and grist mill, and sufficient water to irrigate at least 50 or 75 acres; a large lake is created by the dam, furnishing good fishing. The community is a good one. Nature has put its charm to this spot, and could be developed and made a real paradise for man on earth. The price placed on this desirable property—only \$16,500—is very low. This is the biggest bargain in Texas. Write me your wishes; state in your first letter what size tract you want, agricultural or ranch land; what capital you have to invest. I have improved farms, small and large, colonization tracts from 200 to 25,000 acres, ranches of 5000 to 30,000 acres at prices from \$1.50 to \$30 per acre. Suitable terms given. Act now. Write B. P. Hintze, 214 East 6th Street, Austin, Texas.

### VIRGINIA

**TWELVE DOLLARS PER ACRE**, Virginia farm, 730 acres; 300 cultivated, 100 oak timber, balance cut-over pine with some good small timber; 3 dwellings (old); 2 miles from R. F. & P. Ry., on good sand-clay road. Timber, if handled right, will pay for property. Terms, 1/2 cash. Write now. James T. Cosby, 301 Mutual Bldg., Richmond, Va.

### SHENANDOAH VALLEY

#### OF VIRGINIA.

Where Blue Grass and Alfalfa Grow.

In the heart of the Apple Belt. Delightful climate. Fertile Soil.

Write John M. Londeree,

Staunton, Va.

## INCORPORATING COMPANIES

### DELAWARE CHARTERS.

Stock Without Par Value.

Directors Need Not Be Stockholders.

Other important amendments (March 20, 1917).

Write for new DIGEST (4th ed.).

CORPORATION COMPANY OF DELAWARE

Equitable Building, Wilmington, Delaware.

Attorney,  
Practice  
Court of  
D. C. Sup.  
Executive  
Judicial,  
Trade Co.  
Commission

### BUSINESS

**WANTED.**  
thousand  
inactive  
dealers ac

**DOUBLE**  
Up-to-date  
for behind  
for selling

**LEGITIMATE**  
Cattle feed  
and capact  
good busi  
superinten  
Co., F. O.

**INDIVIDUAL**  
tory for  
\$15,000. T  
Location, R  
manager v  
and lumber  
care Manu

**FOR SALE**  
30 acres  
Broadway  
15 acres.  
Ada, Okla.

**FOR SALE**  
Railway,  
feet, equip  
facturing  
would like  
tendent.  
turners Rec

**FOR SALE**  
machinery  
road slidin  
annually,  
customers  
ill-health.  
business.

**FOR SALE**  
basin, all  
in the U.  
full of water  
ship 800 ft  
Miami Riv  
Box 453, M

**BUSINESS**  
tive with  
an old-cas  
is on a  
reasons for  
able price.

**A FEW**  
population  
Manufactu  
quick. S. W.

**WANTED.**  
35, with \$50  
material, 1  
ter into part  
in U. S.  
established  
and South  
essential.  
proper co-  
Box 429, P

**FOR SALE**  
tomatic Sp  
and fitting  
see adjoining  
order. Fly  
weather of  
automatic  
offs, air pu  
in first-cla  
a minute's  
1300 feet of  
Main pipe  
with the v  
ing. This  
it was plac  
cotton, an  
now. Can  
Batesburg,  
Prices reas  
L. D. Braw

**OPPORTUNITY**  
lands. For  
machinery,  
a broker w  
put. Write  
1445, Atlant

**FOR SALE**  
front facto  
farms, mod  
road. Writ  
Wheeler, N

**WILL SELL**  
est in 4500  
\$15 per ac  
sacrifice be  
Box 44, Da



# Classified Opportunities

## ATTORNEYS

**RAYMOND M. HUDSON,**  
Attorney, Washington, D. C.  
Practice before U. S. Supreme Court, U. S. Court of Claims, D. C. Court of Appeals, D. C. Supreme Court, Va. and Md. Courts, Executive Departments, Congressional Committees, Federal Reserve Board, Federal Trade Commission, Interstate Commerce Commission. Cable "Rayhud."

## BUSINESS OPPORTUNITIES

**WANTED**—Partner with from six to eight thousand to invest with like amount in a lucrative manufacturing business. For particulars address Box 304, Anniston, Ala.

**DOUBLE BAND MILL** in North Carolina. Up-to-date equipment. Ample standing timber behind it. Making money. Good reason for selling. Green & Kedd, Richmond, Va.

**LEGITIMATE** opportunity to invest \$10,000. Cattle feed plant. Wish to double machinery and capacity. Needs an executive head with good business ability. Have an expert as superintendent at mill. Write Cattle Feed Co., P. O. Box 1443, Atlanta.

**INDIVIDUAL** wishes to incorporate factory for additional capital from \$5000 to \$15,000. The sale of output is guaranteed. Location, Kentucky, in a thriving city. Active manager with a thorough knowledge of oak and lumber to take charge. Address No. 3041, care Manufacturers Record, Balto., Md.

**FOR SALE**—One-half undivided interest in 30 acres in industrial addition on North Broadway in the city of Ada; my interest 15 acres. L. H. Koll, 123 East Tenth street, Ada, Okla.

**FOR SALE OR LEASE** on the L. & N. Railway, a factory, main building 80x225 feet, equipped with machinery for manufacturing dump cars. If sale is not effected, would like to employ a competent superintendent. Address No. 3087, care Manufacturers Record, Baltimore, Md.

**FOR SALE**—Up-to-date planing mill, with machinery in first-class condition, on railroad siding, and doing business of \$225,000 annually. Desirable, prompt-paying lot of customers go with it. Reason for selling, ill-health. Right price to party meaning business. P. O. Box 596, Buffalo, N. Y.

**FOR SALE**—Boat yard and storage yacht basin, all covered. The largest covered basin in the U. S. 72 yachts on storage and yard full of work. New building for machine shop 800 feet of river front, large ways, on Miami River, fresh water. Address P. O. Box 453, Miami, Fla.

**BUSINESS OPPORTUNITY**—Good executive with small capital can secure control of an old-established mercantile business which is on a good paying basis. Satisfactory reasons for selling at exceptionally reasonable price. P. O. Box 152, Richmond, Va.

**A FEW** State rights for \$100 per million population, 5% royalty. Article described in Manufacturers Record of May 3 and 10. Act quick. S. W. Hales, 779 4th Ave., Detroit, Mich.

**WANTED**—A HUSTLER between 23 and 35, with \$5000 and knowledge of construction material, machinery and supply line, to enter into partnership, handling purchasing end in U. S., with energetic American having established business and clientele in Central and South America. Ability above average essential. Unlimited opportunities with proper co-operation. References exchanged. Box 425, Panama, R. P.

**FOR SALE**—One complete Grinnell's Automatic Sprinkler Dry Air system; piping and fittings now in building 50x110 and office adjoining; piping in perfect preservation and whole system in perfect working order. Piping has never been exposed to weather or fire nor had water in them; all automatic tips are in perfect condition; cut-offs, air pumps and all connections are now in first-class condition and have never given a minute's trouble. This system has about 1200 feet of iron piping from 1/2" to 6" size. Main pipes and connections were installed with the view of extending for larger building. This system is for sale for no fault, but it was placed in building in 1914 to store cotton, and is not used for that purpose now. Can be seen at our office in the town of Batesburg, near Columbia, S. C., at any time. Prices reasonable. If interested, write or wire L. D. Rrahman Co., Inc., Batesburg, S. C.

**OPPORTUNITY** for owners of pine timber lands. For Sale—Complete set nail-peg-stave machinery, nearly new. While clearing land a broker will make steady contract for output. Write Coopersage Company, P. O. Box 1443, Atlanta, Ga.

**FOR SALE**—Business properties, waterfront factory or terminal site, several large farms, modern hotel, factory sites on railroad. Write me what you want. Julian Wheeler, Newport News, Va.

**WILL SELL OR TRADE** my \$10,000 interest in 3000 acres of Florida lands, valued at \$15 per acre. This is a real bargain. Must sacrifice because of other holdings. Address Box 44, Dade City, Fla.

## BUSINESS OPPORTUNITIES

**TIMBER**, agricultural, ranch, mineral, oil investments, Texas or Oklahoma. Experienced and familiar this class investments. Great opportunities right now. Bank references. D. E. Hirschfeld, Waco, Texas.

## BUILDINGS—STEEL PORTABLE

**"PRUDENTIAL" STEEL BUILDINGS** for all purposes; portable one-story construction; workshops, toolhouses, storage, garages, bunkhouses, etc. Write for Catalog A. C. D. Pruden Company, Baltimore, Md.

## PATENT ATTORNEYS

**PATENTS**—Write for how to obtain a patent, list of patent buyers, and inventions wanted. \$1,000.00 in prizes offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free upon request. Patents advertised free. We assist inventors to sell their inventions. Victor J. Evans Co., Patent Attorneys, 712 Ninth St., Washington, D. C.

**HIGH-VALUE PATENTS**  
Patents that fully protect.  
Patents that pay Largest Financial Returns are the kind we obtain. References.  
**SUCCESSFUL** inventors and **WELL-KNOWN** Manufacturers. Send 8 cents for new book of extraordinary interest and value to inventors. R. S. & A. B. Lacey, 93 Barrister Building, Washington, D. C. Established 1869.

**EUGENE C. BROWN, ENGINEER AND PATENT LAWYER**, 754 Eighth St. N. W., Washington, D. C.  
High University; Member Bar U. S. Supreme Court; Former Examiner U. S. Patent Office. **PATENTS AND TRADEMARKS.** Inventions considered from engineering and legal standpoint. Infringements and extent of patent monopoly investigated for manufacturers. Glad to answer any inquiries.

**PATENTS—TRADEMARKS**—Highest professional service. I personally examine the Patent Office records in regard to and personally prepare and prosecute every application filed through my office. Highest references. Booklet, "The Truth About Patents," and honest advice free. J. R. Kelly, Patent Attorney, 750 Woodward Bldg., Washington, D. C.

**INVENTIONS—PATENTING AND PROMOTING**—A book containing practical advice and directions for inventors and manufacturers. Book, suggestions and advice free. Lancaster & Allwine, Registered Attorneys, 265 Ouray Bldg., Washington, D. C.

**PATENTS**  
**THAT PROTECT AND PAY**  
Advice and books free. Highest references. Best results. Promptness assured.  
Trade Marks registered.  
Watson E. Coleman, Patent Lawyer,  
624 F St., Washington, D. C.

**POSTAL** bill bring free booklet telling all about patents and their cost. Shepherd & Campbell, Patent and Trade-Mark Attorneys, 732 8th St., Washington, D. C.

**PATENT YOUR IDEAS**—\$9000 offered for certain inventions; book, "How to Obtain a Patent" and "What to Invent," sent free upon request; send for sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, Patent Attorneys, 978 F St., Washington, D. C.

Patents secured or fee returned. Actual search and report free. Send sketch or model. 1917 Edition, 90-page patent book free. Personal and prompt service. My patent sales service gets full value for my clients. George P. Kimmel, 288 Barrister Bldg., Washington, D. C.

**PATENTS and TRADEMARKS**  
Procured by a former Examining Official of the U. S. Patent Office,  
**NORMAN T. WHITAKER,**  
Attorney-at-Law, Mechanical Engineer,  
31 Legal Bldg., Washington, D. C.  
(Opposite Patent Office.)  
Inquiries Invited.

## SHIPBUILDING SITES

**SHIPBUILDING SITES,**  
**FERNANDINA, FLORIDA.**  
We invite prospective shipbuilders to investigate opportunities offered here. Chamber of Commerce, Fernandina, Fla.

## FACTORY SITES

**FOR SALE**—Factory site, 204-foot siding on N. & C. & St. L. R. R. and running back 276 feet to T. C. R. R., connecting I. C. R. R. This site formerly occupied by the Enterprise Soap Works of Nashville, Tennessee. Address B. J. Fox, 308 First Ave. N., Nashville, Tenn.

**FACTORY SITES**—150x190 ft. on Belt Line, Birmingham; has 150 ft. sidetrack, corner, close in. Would lease for long term to responsible party. R. S. Magruder, 263 Government St., Mobile, Ala.

## FACTORY SITES

**BALTIMORE FACTORY AND TERMINAL SITES**—Statement of Asa G. Candier, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements.

**"OUR MOTTO":**  
**FACTORY AND TERMINAL SITES**  
IN BALTIMORE.  
Wm. Martien & Co.,  
Ninth Floor, Lexington St. Bldg., Balto., Md.

**FOR SALE** at a bargain, large plot of land situated on railroad and within city limits. It is an ideal location for a factory or lumber yard. For further information apply to C. H. Ferrell & Co., 106 West Plume St., Norfolk, Va.

## INDUSTRIAL PLANTS FOR SALE

### FOUNDRIES AND MACHINE SHOPS

**FOR SALE**—Well-equipped foundry and machine shop, located in North Alabama. Property fronting 500 ft. on R. R. Will sell plant as a whole or machinery and equipment. Excellent location in town of 8000 to 10,000. For particulars address A. J. McGarry, Howard, Ohio.

**FOR SALE**—Foundry and machine shop; main foundry building, 180x80 ft., fitted up with traveling cranes and everything necessary in an up-to-date foundry; 600-ft. railroad siding. For further information apply to J. H. Gill, Raleigh, N. C.

**FOR SALE**—A foundry and machine shop property, doing a good mine and mill supply business with fine opportunity to enlarge. Located at the terminal of four divisions of the Baltimore & Ohio Railroad Co. in central West Virginia. Address Postoffice Box No. 455, Grafton, W. Va.

**FOR SALE**—Well-equipped machine shop, located on river in heart of Tampa. Great interest now in shipbuilding. Good opportunity to right man. Good reasons for selling. C. H. Thompson, Winter Haven, Fla.

### ROLLER FLOUR MILL

**FOR SALE**—To settle an estate, 30-barrel roller flour mill, with 300-bushel burr corn mill; good water-power; machinery and equipment in good shape; good trade in flour, meal and foodstuffs; excellent neighborhood. About 140 acres good land. G. C. Stone, Hurt, Va.

### IRON, BRONZE AND WIRE WORK

**FOR SALE**—Iron, bronze and wire works; plant running full time on good-paying orders; needs experienced manager and some new capital. Address W. E. McClamroch, V. Pres., Jackson, Tenn.

### STONE CRUSHING PLANT

**FOR SALE**—Complete, well-equipped stone-crushing plant in granite quarry, located on main line prominent railroad; no haul; railroad siding to bins. Quantity of stone unlimited. Splendid market for product. Owners now have contract with railroad for capacity of plant. Good reasons for selling. For further information, terms, etc., apply E. E. Johnson, Culpeper, Va.

### ICE PLANT

**FOR SALE**—Ten-ton ice plant in first-class condition in a growing town of 2500 on the Santa Fe Railroad, D. C. D. and Great Plains highways. For particulars write J. C. Studer, Canadian, Texas.

### PLOW FACTORY

**STRICTLY** up-to-date plow factory for sale, well located and will bear close inspection. Machine, blacksmith, paint, wood-working and foundry department, large warehouse. Capacity \$250,000. Track on yard; generate own power and lights. Box 88, Brooksville, Miss.

**WOODWORKING PLANT AND BRICK YARD**  
**AUCTION SALE JUNE 6**—One up-to-date woodworking and furniture factory; also two brick yards, electrically equipped, with daily capacity of 40,000 each. For full particulars address S. P. Woodcock & Co., Salisbury, Md.

### CARRIAGE AND BLACKSMITH PLANT

**FOR SALE**—Going, established plant; two-story brick building, with modern carriage and blacksmith plant, doing \$20,000 to \$25,000 annual business, established 16 years. This is the chance of a lifetime for the right man. Present owner is sick and must go to higher altitude. For details write Roy B. Nichols, Houston, Tex.

### MACHINERY MANUFACTURING PLANT

**FOR SALE**—Southern plant suitable for making heavy machinery, such as lathes, hoists, etc. Exceptional bargain offered with large prospective profits. Address No. 906, care Manufacturers Record, Balto., Md.

## AGENCIES WANTED

**HAVE** you a broker in Jacksonville city or State of Florida? I represent the hardware, grocery or general manufacturer on commission basis. G. M. Clark, Box 1302, Jacksonville, Fla.

## MEN WANTED

**IF ACTUALLY QUALIFIED** for salary between \$2500 and \$25,000, communicate with undersigned, who will negotiate strictly confidential preliminaries for such positions; executive, administrative, technical, professional; all lines. Not an employment agency; undersigned acts in direct confidential capacity, not jeopardizing present connections. Established 1910. Send name and address only for explanatory details. R. W. Bixby, El Niagara Square, Buffalo, N. Y.

**WANTED**—Syndicate of Business men wish to communicate with thoroughly experienced, practical brick and drain tile man, who would be competent to manage plant now built but not in operation. Person acceptable would be required to make small investment. Good opportunity for one who knows the business and is a hustler. Address No. 3089, care Manufacturers Record, Balto., Md.

**WANTED**—Engineers experienced in bituminous macadam construction. Must be capable of taking complete charge of new work, including grades, culverts, drainage and all engineering work. Rush job. State experience, references and salary expected. Address E. C., Room 712, 351 Fourth Ave., New York City.

**WANTED**—Foreman experienced in bituminous macadam road construction. State experience, references and salary expected. Address B. M., Room 712, 351 Fourth Ave., New York City.

## OFFICE EQUIPMENT

### BARGAINS.

Adding machines, calculating machines, duplicating machines, rotary mimeographs, addressing machines, check writers, envelope sealers, etc. All makes, new, used and rebuilt. Every machine guaranteed in perfect mechanical order. Collins & Co., 1324 Arch St., Philadelphia, Pa.

## MACHINERY AND SUPPLIES

### KEG STAVE MILL OUTFIT

**FOR SALE**—Keg stave mill outfit complete, in good condition, Camp Manufacturing Company, Franklin, Va.

### PUMPING PLANT

**FOR SALE**—SECOND-HAND PUMPING PLANT—24" Worthington single-auction centrifugal pump, 155 H. P. Babcock & Wilcox water-tube boiler, 240 H. P. Bucyrus engine, vertical, cross-compound. Pumping capacity, 15,000 gal. per min. 26-ft. lift. Condenser, water heater, boiler-feed pump and other attachments, complete. In perfect shape, ready to run. For particulars address P. O. Box No. 2, Pierce, Texas.

### SAWMILL OUTFIT

**FOR SALE**—Sawmill outfit, consisting of one 20 H. P. Farquhar engine and boiler on wheels, one Farquhar No. 3 sawmill, two saws and driving belt. Will sell for half cash and half in lumber. Standard Box & Lumber Co., Inc., Lynchburg, Va.

### CORLISS ENGINE

**FOR SALE**—One 22x48 Cooper Corliss engine, cylinder rebored, new head, rings and rod, valves reworked, thoroughly overhauled; A-1 condition, guaranteed. A bargain. By Mecklenburg Iron Works, Charlotte, N. C.

### ANGLE IRON

**FOR SALE**—30,000 lbs. 1/4 by 1 1/2 black angle iron. Make us an offer. Florida Metal Products Co., Jacksonville, Fla.

## MACHINERY and SUPPLIES WANTED

### POSTOFFICE FIXTURES

**WANTED**—Postoffice fixtures, including 156 small and 40 medium lock boxes; one safe, 22 inches wide, 13 inches high, 23 inches deep, with steel chest inside; one roll-top desk, 48 inches long, with two sets of drawers; one table, quartered oak, 30x24; one mailing case and table, 50 divisions; one dumping table. Let us know what you have and price on same. Frazier I. Kershaw, R. C.

### MILLING EQUIPMENT

**WANTED**—Prices on second-hand six or eight-foot Hardinge mill and cypress tank twenty-two feet in diameter, also the smaller machines necessary for installation of 100-ton flotation unit. Address Mill, Box 374, Salisbury, N. C.



# PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close June 2, 1917.

**UNITED STATES CAPITOL**, Washington, D. C., May 9, 1917. Sealed proposals, in duplicate, for the following fuel for the United States Capitol Power Plant for the fiscal year ending June 30, 1918, will be received at the office of the Superintendent U. S. Capitol Building and Grounds until two o'clock P. M. on the second day of June, 1917, and at that hour opened in the presence of those bidders who elect to be present, viz.: 25,000 tons, more or less, of bituminous coal. Bidders must specify names of coal and location of mines from which obtained. All coal to weigh 2240 pounds to the ton, and to be delivered on the siding of the Capitol Power Plant, situated in Garfield Park, Washington, D. C. (Pennsylvania Railroad), at such times and in such quantities as may be ordered by the undersigned. All coal will be inspected and weighed by a Government inspector designated by the undersigned, for which no charge will be made to the contractor. Each proposal must be accompanied by a certified check for \$100, payable to order of the Superintendent U. S. Capitol Building and Grounds, to be forfeited to the United States upon refusal or failure of the bidder to enter into any contract within 10 days after being required to do so. Checks will be immediately returned to unsuccessful bidders, and to successful bidder upon execution of contract in accordance with these specifications and filling of bond for faithful performance of the conditions thereof, with satisfactory sureties. All coal must be shipped in self-cleaning hopper-bottom cars. If the contractor delivers coal in cars of a type other than that heretofore described, the superintendent reserves the right under conditions existing at that time to charge against the contractor the excess cost of handling the coal with the present equipment at the Power Plant. Contract awarded for material herein called for is subject to an appropriation by Congress to meet the expenses. The Government will take all necessary steps for testing, technically and practically, all the coals proposed. In event of delivery of contractor of unsatisfactory fuel, the undersigned shall have the right to buy coal in open market, and excess in cost over contract price will be charged against the contractor. The right is reserved to reject any or all proposals, or waive any technicality therein. Bids should be endorsed "Proposals for Coal" and addressed to the Superintendent U. S. Capitol Building and Grounds. By order of House Office Building Commission. **ELLIOTT WOODS**, Superintendent U. S. Capitol Building and Grounds.

Bids close June 2, 1917.

**PROPOSALS FOR SCHOOL EQUIPMENT**, including Desks, Chairs, Tables, Cases, Cabinets, Clocks, Wastebaskets, Mats, etc., Steel Cable, Link Pins, Brass Tubing, Copper Tubing, Rivets, Washers, Screws, Valves, Marine Brushes, Steam-jacketed Kettles, Stock Pots, Water Coolers, Window Glass, Hose, Packing, Tarpsaulins, Toweling, Twine, Gloves, Paper Cups, Steel Tapes, Crayons, Carbide, Asbestos Cement, Lye, Metal Polish, Soap Polish, Soap, and Crosties. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 A. M. June 2, 1917, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (No. 1145) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney Central Building, New Orleans, La.; and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. **EARL I. BROWN**, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Bids close May 28, 1917.

**TREASURY DEPARTMENT**, Supervising Architect's Office, Washington, D. C., May 1, 1917. Sealed proposals will be opened in this office at 3 P. M. May 28, 1917, for a new heating system, etc., in the United States postoffice at La Crosse, Wis., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the custodian, La Crosse, Wis., in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 5, 1917.

**TREASURY DEPARTMENT**, Supervising Architect's Office, Washington, D. C., May 5, 1917. Sealed proposals will be opened in this office at 3 P. M. June 5, 1917, for new plumbing fixtures, etc., in the United States custom-house and postoffice at Wiscasset, Maine, in accordance with the specification and drawing, copies of which may be had at this office or at the office of the custodian, Wiscasset, Maine, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 21, 1917.

**TREASURY DEPARTMENT**, Supervising Architect's Office, Washington, D. C., May 12, 1917. Sealed proposals will be opened in this office at 3 P. M. June 21, 1917, for the construction, complete, of the United States postoffice at Cambridge, Md. Drawings and specifications may be obtained from the custodian of site at Cambridge, Md., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

## PROPOSAL ADVERTISING INFORMATION

RATE: 25 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

### THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—25 cents per line per insertion.

Bids close June 22, 1917.

**TREASURY DEPARTMENT**, Supervising Architect's Office, Washington, D. C., May 14, 1917. Sealed proposals will be opened in this office at 3 P. M. June 22, 1917, for the construction of the United States postoffice at Fordyce, Ark. Drawings and specifications may be obtained from the custodian of the site at Fordyce, Ark., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 20, 1917.

**TREASURY DEPARTMENT**, Supervising Architect's Office, Washington, D. C., May 11, 1917. Sealed proposals will be opened in this office at 3 P. M. June 20, 1917, for the construction of the United States postoffice at Beaufort, S. C. Drawings and specifications may be obtained from the custodian of the site at Beaufort, S. C., or at this office, in the discretion of the Acting Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 12, 1917.

**TREASURY DEPARTMENT**, Supervising Architect's Office, Washington, D. C., May 3, 1917. Sealed proposals will be opened in this office at 3 P. M. June 12, 1917, for the construction of the United States postoffice at State College, Pa. Drawings and specifications may be obtained from the custodian of the site at State College, Pa., or at this office, in the discretion of the Supervising Architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 16, 1917.

**PROPOSALS FOR CEMENT**, U. S. Engineer Office, Montgomery, Ala. Sealed proposals for furnishing and delivering about 14,000 barrels of American Portland cement will be received at this office until 2 P. M. June 16, 1917, and then publicly opened. Information on application.

Bids close June 9, 1917.

**PROPOSALS FOR GRAVEL OR CRUSHED STONE**, U. S. Engineer Office, Montgomery, Ala. Sealed proposals for furnishing and delivering about 16,000 tons of gravel or crushed stone will be received at this office until 2 P. M. June 9, 1917, and then opened. Information on application.

Bids close May 23, 1917.

**PROPOSALS FOR COAL**, U. S. Engineer's Office, Montgomery, Ala. Sealed proposals for furnishing about 4000 tons of bituminous coal will be received at this office until 2 P. M. May 23, 1917, and then opened. Information on application.

Bids close May 24, 1917.

### \$75,000 5% Bonds

#### TEN-YEAR CITY PAVING DISTRICT BONDS.

S Salisbury, N. C. Sealed proposals will be received by Walter H. Woodson, Mayor of the City of Salisbury, N. C., up to 8 o'clock P. M. May 24, 1917, for approximately \$75,000 city bonds, bearing interest at 5 per cent., interest payable semi-annually (the interest and one-tenth of the principal payable annually at the National Park Bank, New York); bonds to be dated June 1, 1917, and will mature at the rate of one-tenth of the amount yearly for ten years and will be for one thousand dollars (\$1000) each.

Certified check for \$500 will be required with each bid to be applied to purchase in the event of acceptance.

The City of Salisbury reserves the right to reject any and all bids. Bids will be opened by the Mayor and Board of Aldermen at 8 o'clock P. M. May 24, 1917.

For further information address J. D. Norwood, Chairman of Finance Committee, Salisbury, N. C., or the undersigned.

**WALTER H. WOODSON**, Mayor,

**T. H. VANDERFORD, JR.**, City Attorney, Salisbury, N. C.

Bids close May 24, 1917.

### \$500,000 4% Bonds

#### NORTH CAROLINA.

##### RALEIGH, N. C.

Sealed proposals will be received at the office of State Treasurer until noon Thursday, May 24, 1917, for the purchase of all or any part of the following bonds:

\$25,000 4% ten-year bonds for "The State Home and Training School for Girls and Women," dated July 1, 1917, expiring July 1, 1927.

\$75,000 4% ten-year bonds for "Caswell Training School," dated July 1, 1917, expiring July 1, 1927.

\$400,000 4% forty-one-year bonds for "Road Building," dated July 1, 1917, expiring July 1, 1958.

Blanks for bidding will be furnished upon application to me.

**B. R. LACY**, State Treasurer.

Bids close May 24, 1917.

### \$35,000 Street Improvement Bonds

Bids will be received on \$35,000 street-improvement bonds of the Town of Weldon, N. C., on the 24th day of May, 1917, at 12 o'clock M. on both a 5 and 6 per cent. semi-annual interest basis, bonds to be in denominations of \$500 or \$1000, at option of purchaser, payable at some New York bank with maturities as follows: \$1000 per annum from 1925 to 1940, inclusive; \$500 per annum from 1941 to 1942, inclusive; \$500 in each of years 1943 and 1945. The right to reject any and all bids is hereby expressly reserved. For further information apply to Geo. C. Green, Mayor, Weldon, N. C. All bids shall be sealed and accompanied by certified check on some national or State bank in the sum of one thousand dollars.

**GEORGE C. GREEN**, Mayor, Weldon, N. C.

Bids close May 22, 1917.

### \$125,000 Highway Bonds

The Highway Commission of Union Township, Union County, South Carolina, offer for sale \$125,000 Union Township Bonds for constructing public highways in said township in denominations of \$1000 each. Bonds are forty-year coupon bonds, with the right of redemption after twenty years. Interest is payable semi-annually in New York City July the first and January the first. Bonds will be dated July the first, 1917. Make bids at par value of the bonds and lowest rate of interest.

All bids must be accompanied by a certified check of \$1000 and addressed to either A. G. Kennedy, Chairman, or E. W. Stone, Secretary of the above-named Commission, and must reach them on or before noon of the 23rd day of May, 1917, at which time said bids will be opened at Union, S. C. The said Board reserves the right to accept or decline any or all bids submitted.

This 25th day of April, 1917.

(Signed) **A. G. KENNEDY**, Chairman of Commission.

**E. W. STONE**, Secretary of Commission.

Bids close May 29, 1917.

### \$60,000 5% Bonds

The Commissioners of Youngsville Drainage District will receive proposals for the purchase of \$60,000 5 per cent. Drainage bonds, voted for the purpose of draining the lands in said district.

Proposals will be publicly opened Tuesday, May 29, 1917, at the office of the Board in Youngsville, La., at 2 P. M. A certified check for 5 per cent. of amount bid must accompany each bid. The Board reserves the right to reject any or all bids. For further information address

**B. F. FLANDERS**, Chairman, Youngsville, La.

**JEROME MOUTON**, Attorney of Board, Lafayette, La.

Bids close June 7, 1917.

### \$100,000 5% Bonds

The Town of Greenville, N. C., will receive sealed bids for One Hundred Thousand Dollars Five Per Cent. Water and Light Improvement Bonds, and also Six Per Cent. Water and Light Improvement Bonds, which it proposes to issue. Bids will be opened at the regular meeting of the Board of Aldermen to be held June 7, 1917, at 8 o'clock P. M.

All bids must be accompanied by certified check for Two Thousand Dollars to insure compliance with bid if accepted. Address bids to the Mayor or Clerk.

Bids close June 19, 1917.

### \$75,000 5% Bonds

The Board of Supervisors of Allen Parish (County), Louisiana, Road District Number 2 (2), will open sealed bids at ten o'clock A. M. June 19, 1917, for \$75,000 five (5%) per cent. semi-annual interest twenty-year bonds. Maturities serial, one to twenty years. New York payment. Certified check for 2% per cent. of face value of bonds to accompany bid. Purchaser to furnish blank bonds at his expense. Delivery will be facilitated by shipment of bonds by express to satisfactory bank in reserve city, the purchaser to pay express and exchange charges. The bonds are offered subject to opinion of Wood & Oakley, Chicago, whose preliminary approving opinion is now in hand. Full data will be furnished on application to G. M. King, Jr., Secretary-Treasurer, Klinder, Louisiana. The right is reserved to reject any or all bids.

Bids close May 31, 1917.

### \$200,000 5% Bonds

#### HARRISON COUNTY, WEST VIRGINIA. CLAY DISTRICT ROAD BONDS FOR SALE.

Sealed bids will be received by the County Court of Harrison County, West Virginia, up to 2 o'clock P. M. on the 31st day of May, A. D. 1917, for the purchase of \$200,000 of a \$200,000 authorized issue of Clay District Coupon Bonds, dated August 1, 1916, and \$12,000 annually August 1, 1926, to August 1, 1941, inclusive, and will be of the denomination of \$1000, bearing interest at the rate of 5 per centum per annum, payable semi-annually February 1 and August 1 of each year.

The principal of said bonds will be payable at the office of the Clerk of the County Court, Clarksburg, Harrison County, West Virginia, or at the National City Bank in the City of New York, at the option of the purchaser. Interest will be payable at the office of the Clerk of the County Court, Clarksburg, Harrison County, West Virginia, or at the Guaranty Trust Company in the City of New York, at the option of the purchaser.

Bids to be accompanied by a certified check on a national bank or trust company, payable to the County Court of Harrison County, equal to 2 per cent. of the par value of bonds bid for.

The right is reserved to reject any and all bids. Bids for less than par and accrued interest cannot be considered. Form of bid furnished on application to

**J. JAMES CREWS**,

Clerk County Court Harrison County, West Virginia.

Bids close May 22, 1917.

### \$357,000 General Liability Bonds

**CONDENSED NOTICE TO BIDDERS.** Notice is hereby given that sealed bids will be received by C. C. Pashby, City Clerk of Memphis, at the City Hall in Memphis, Tennessee, until 2:30 o'clock P. M. Tuesday, May 22, 1917, for the following bonds of the City of Memphis, Tennessee, viz.:

Three hundred fifty-seven thousand (\$357,000) dollars of general liability serial coupon bonds in the denomination of one thousand dollars each, authorized by an Act of the General Assembly and an ordinance of the City of Memphis.

Interest rate to be fixed in resolution of sale, but not to exceed 5 per cent. per annum. Interest payable January and July.

Bonds to be dated January 1, 1917. Maturities run from 1922 to 1943, with average of 17% years. Bonds will be prepared and delivered at New York or equivalent by City of Memphis upon payment of par, premium bid and accrued interest. Unqualified approving opinion of John C. Thomson of New York also to be furnished to purchaser with transcripts, etc., without cost to bidder.

Unqualified good-faith deposit of four thousand dollars must accompany bid. The right is reserved to reject any and all bids.

Sale to be on sealed bids publicly opened and read at time and place above indicated. For further information apply to the undersigned.

This 7th day of May, 1917.

**T. C. ASHCROFT**, Mayor.

Attest: **C. C. PASHBY**, City Clerk.



# PROPOSALS

SEWERS WATER-WORKS ELECTRIC LIGHT PLANTS BRIDGES

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close May 24, 1917.

## Arkansas Drainage Bonds For Sale

Sealed bids will be received for \$250,000 to \$300,000, when, if and as issued, until 1 o'clock P. M. Thursday, May 24, 1917. Make offers for both 5 per cent. and 5½ per cent. bonds. All bids will be opened at the office of A. W. Hall, 221 South Main Street, Jonesboro, Ark., at 1:30 P. M. on above date. For information address A. W. Hall, Secretary, Jonesboro, Ark.

Bids close June 5, 1917.

## Hard Surfaced Roads

Sealed proposals for the construction of hard-surfaced paving in Special Road and Bridge District No. 1, Broward County, will be received by the Board of County Commissioners of Broward County, Florida, at Fort Lauderdale, Fla., until 11 A. M. June 5, 1917, and then publicly opened.

The proposed work consists of constructing hard-surfaced roads along the existing roadway embankments along the lines of Roads "A," "B," "C" and "D" in Special Road and Bridge District No. 1, the total length of the proposed improvement being approximately fifteen miles.

Plans and specifications for the proposed work are on file and may be examined at the office of the Clerk of the Board, and all bids must be submitted on blank forms which may be obtained from the Engineer.

Complete plans and specifications may be obtained from the Engineer upon payment of \$5 to cover cost of preparation. This amount will not be returned.

Certified check for \$500, payable to the Chairman of the Board of County Commissioners, must accompany all bids as evidence of good faith. Check of the successful bidder will be retained by the Board of County Commissioners as liquidated damages for the cost and expense incurred should the said bidder fail to enter into a satisfactory contract with good and sufficient sureties for the faithful performance of the work within ten days after the acceptance of his bid.

The successful bidder will be required to furnish bond in the full amount of the contract price, executed by a surety company satisfactory to the Board of County Commissioners.

The right is reserved to reject any and all bids.

FRANK A. BRYAN,  
Clerk of the Board.

H. C. DAVIS, Engineer.

## Street Improvement

Proposals will be received by E. E. Erwin, Recorder, on or before 8 o'clock P. M. Friday, May 25, 1917, at the City Hall, Columbia, Tenn., for paving West Seventh street, South Main street, South Garden street and Railroad street with asphaltic concrete on macadam foundation; also otherwise improve said streets and further proposals for laying permanent sewers in or on South Garden street and South Main street. Bids to be received for all or any section thereof. Said bids will be opened at 8 P. M. Friday, May 25, 1917, in the presence of the Board in Session, and the contract let if any awarded. The right to reject any or all bids is specially reserved. Bidders are required to deposit (10) ten per cent. of the amount of bid as a guarantee fund in checks or other security to be approved by the Board in Session.

CITY OF COLUMBIA, TENN.,  
J. M. DEDMAN, Mayor.

Attest:  
E. E. ERWIN, Recorder.

Bids close May 24, 1917.

## Street Paving

Bids are invited by the City of Hickory, N. C., until 8 P. M. May 24, 1917, on approximately 40,000 sq. yds. of Sheet Asphalt Paving. All bidders will be required to file a certified check in the sum of \$100, which will become a forfeit to the City of Hickory if contract is not entered into and bond executed promptly after the award. The successful bidder will be required to file a bond in the sum of \$40,000 with some satisfactory guaranty company to safeguard the performance of the conditions of the contract.

The City of Hickory reserves the right to reject any and all bids.

Specifications may be seen at the office of the City Manager.

This May 5, 1917.

CITY OF HICKORY,  
JOHN W. BALLEW,  
City Manager.

J. N. AMBLER,  
Consulting Engineer.

Bids close May 20, 1917.

## Highway Work

The Highway Commissioners of Washington County, Miss., will receive at their office in Greenville, Miss., on Wednesday, May 30, 1917, sealed proposals for the surfacing with concrete, warrentite or asphaltic concrete of about 150,000 square yards of highways according to plans and specifications on file. For information apply to

J. S. ALLEN,  
Chief Engineer,  
Greenville, Miss.

Bids close May 26, 1917.

## Highway Construction

Sealed proposals, on blank forms attached to specifications, will be received by the Board of County Commissioners of Polk County, Florida, at Bartow, Fla., until 10 A. M. May 26, 1917, at which time they will be opened and read publicly, for furnishing material, labor and equipment for the improvement and construction of highways in the Special Road and Bridge District of Winter Haven, Fla.

Bids will be asked on approximately 302,000 square yards of Asphalt Road Paving with the necessary pipe drainage, culverts, etc., and nine (9) reinforced concrete bridges, each having a span of approximately twenty feet.

Each bid is to be accompanied by a certified check made payable to the Board of County Commissioners, Polk County, Florida, for at least two thousand (\$2000) dollars, which entitles the contractor to bid on either the general paving as a division, or on the construction of bridges as a division, or on all classes of the work.

The right is reserved to reject any and all bids.

Plans and specifications may be seen at the office of the County Clerk, Bartow, Florida, or at the engineer's office, Winter Haven, Fla., after April 25, 1917, and copies of the specifications may be obtained from either of the above stated offices upon receipt of \$1, which will be returned when the specifications are returned in good order with a bona-fide bid on the work.

The contract will be awarded as soon as practicable after the opening of proposals.

J. A. JOHNSON, Clerk,  
Bartow, Fla.

G. W. ALLENWEBER, Engineer,  
Winter Haven, Fla.

Bids close May 21, 1917.

## Road Construction

Sealed bids for the construction of roads in Beauregard Parish will be received by the Police Jury at the office of its Clerk in the Courthouse in De Ridder, La., until twelve (12) o'clock noon May 21, 1917, and will be publicly opened and read at the meeting of the Police Jury immediately following.

Bids not made in accordance with the instructions to bidders will be considered irregular and subject to rejection.

Specifications, bidding blanks and form of contract and bond, also plans and profiles, can be seen on application to the undersigned. They may be secured on application to the Clerk, but a deposit of \$250 will be required for the specifications and \$750 for the profiles and plans. Deposits will be returned on receipt of bona fide bids or the return of specifications or plans before the day of receiving bids.

A certified check is required by the instructions to bidders and must accompany each proposal to entitle it to consideration. The Police Jury reserves the right to reject any or all bids.

W. R. BAGGETT, President.  
D. W. McFATTER, Clerk.

Bids close June 5, 1917.

## Sand Clay Road

The Road Commissioners of Yadkin County, N. C., will contract to the lowest bidder all the sand-clay roads authorized under the law, being about 27 miles, on June 5.

Conditionally on the sale of said bonds. By order of the Board this May 8.

H. P. WOODRUFF, Chairman.  
E. C. MAYBERRY, Secretary.

Applications close May 24, 1917.

## Wanted Highway Engineer

The Highway Commission for Laurens County, S. C., will meet at Laurens, S. C., on May 24, 1917, at 9 o'clock A. M., for the purpose of selecting an engineer for some 200 miles permanent work. Prefer man with experience on top-soil or gravel roads, without connections, who can give entire time. Mail applications to undersigned. Personal interview requested.

H. B. HUMBERT,  
Supervisor.

LAURENS, S. C.

## Water System

The City of Bogalusa, Louisiana, is in the market for water pipe, hydrants, etc., and also for labor and for installation of same. For detailed information and specifications write K. I. Bean, City Clerk, Bogalusa, La.

Bids close May 25, 1917.

## Water-Works and Sewers

Sealed proposals, addressed to Peter J. Hagen, Town Clerk, Mt. Ranier, Md., will be received until 2:30 P. M. May 25, 1917, for furnishing all materials, tools and labor and constructing complete approximately ten miles of sanitary sewers, 8 inches to 12 inches in diameter; approximately ten miles of water mains, 4 inches to 8 inches in diameter; water-works pumping station, and steel tank and tower. Bids will be received for the entire work or for any portion thereof. Plans and specifications may be seen at the Town Clerk's office, Mt. Ranier, Md., or

at the office of Harry Stevens, Consulting Engineer, Union Trust Building, Washington, D. C., or may be obtained from the Engineer for \$5 per set, the actual cost of printing.

Right is reserved to reject any or all bids. For the information of prospective bidders, the town has the necessary funds for the above work deposited in the bank.

FRED E. WEBER, Mayor.  
HARRY STEVENS, Engineer.

Bids close May 22, 1917.

## Water-Works and Sewers

Bishopville, S. C.  
Each bid must be accompanied by a certified check for ten (10%) per cent. of the total amount bid, drawn to the order of Dr. L. H. Jennings, Mayor.

The right is reserved to reject any or all bids.

Checks of unsuccessful bidders will be returned on award of contract. Check of successful bidder will be retained until bidder makes bond to amount of contract. In event bidder fails to make bond within time specified for construction to begin, the check will be forfeited.

The work will include the furnishing of all material and the installation or construction of the following:

204 lin. ft. 10" cast-iron pipe, Class "B."  
2,940 lin. ft. 6" cast-iron pipe, Class "B."  
4,032 lin. ft. 4" cast-iron pipe, Class "B."  
1.8 tons cast-iron specials.

11 connections to old mains.  
7 standard fire hydrants.  
5 1/2" H. E. gate valves and boxes.  
7 4" H. E. gate valves and boxes.

Excavation, shoring, hauling, laying and back-filling the following material for Sewer System:

31,920 lin. ft. 8" T. C. pipe, average cut 7' 0".  
3,900 lin. ft. 12" T. C. pipe, average cut 5.8".  
7,395 lin. ft. 15" T. C. pipe, average cut 5.5".

92 manholes.  
62 automatic flush tanks.  
682 Y branches.

48 lin. ft. 16" cast-iron pipe, Class "A."  
24 lin. ft. 12" cast-iron pipe, Class "A."  
132 lin. ft. 8" cast-iron pipe, Class "A."

1,451 cubic yards fill.  
34 cubic yards concrete, Class "A."  
134 lin. ft. 8" T. C. riser pipe.

1 reinforced concrete sedimentation tank. Specifications may be obtained from the Engineers or the Town Clerk.

TOWN OF BISHOPVILLE, S. C.  
DR. L. H. JENNINGS,  
Mayor.

W. S. JAMES,  
Clerk.

THE J. B. McCRARY COMPANY,  
Engineers,  
Atlanta, Ga.

Bids close June 12, 1917.

## Sewer System and Disposal Plant

Sealed proposals will be received by the Board of Sewer Commissioners First Sewer District, New Iberia, La., at the Mayor's office, New Iberia, La., until 7:30 P. M. Tuesday, June 12, 1917, for furnishing all materials and building a Sanitary Sewer System and Sewage Disposal Plant.

Each bid must be accompanied by a certified check for an amount equivalent to three per cent. (3%) of the total price asked in the proposal, made payable without qualification to Jules Dreyfus, President Sewer Commission, as an evidence of good faith.

Plans and specifications will be on file at the office of the Secretary of the Sewer Commission, First Sewer District, in New Iberia, La., and the office of the Engineer, Xavier A. Kramer, Magnolia, Mississippi, and copies of the specifications, form of proposals, etc., will be mailed upon application to the Engineer when accompanied by a check for \$10 to guarantee their return within thirty (30) days after the letting.

The right is reserved to reject any or all bids.

This done by order of the Board of Sewer Commissioners, First Sewer District, New Iberia, La.

CHAS. L. PROVOST,  
Secretary.

Bids close June 4, 1917.

## Mining and Crushing Rock

The Fourth District Highway Commission of Pontotoc County, Miss., will receive sealed bids on June 4 for mining and crushing native rock. Check for \$500 to accompany bids. The right is reserved to reject any and all bids.

(Signed) O. J. KNOX,  
C. C. LOCKHART,  
J. W. BELL,  
Commissioners.

Bids close May 21, 1917.

## Contract and Specifications for Building the Out-Shore Portion of Municipal Pier No. 1, Near Sewalls Point

CITY OF NORFOLK, VIRGINIA.

B. P. CHESSON, JR., Consulting Engineer,  
50 Church St., New York, N. Y.

NOTICE TO CONTRACTORS.

Sealed proposals for the above-named work and materials will be received at the office of B. E. Steed, City Clerk, in the City of Norfolk, Va., until 12 o'clock noon on the 21st day of May, 1917.

A copy of each of the following documents—Instructions to bidders, proposals, specifications, contract, contract drawings—will be furnished to the intending bidders on written request, accompanied by a certified check for Twenty-five (\$25) Dollars, payable to the order of the City Comptroller of Norfolk, to be retained by the city.

The documents above referred to will be furnished by the Engineer of the Board of Dock Commissioners, Mr. W. W. Gwathmey, at his office in the Seaboard Bank Building, Norfolk, Va.

The contractor's bond will be One Hundred Thousand (\$100,000) Dollars.

The time allowed for doing and completing the work will be two hundred and seventy (270) calendar days.

A certified check, drawn upon one of the State or national banks of the City of Norfolk to the order of the City Comptroller of Norfolk, in the amount of Five Thousand (\$5000) Dollars, shall accompany the bid.

The right is reserved to reject any or all bids.

BOARD OF DOCK COMMISSIONERS.

Bids close May 22, 1917.

## Highway Bridge Construction

Camden, S. C.  
Notice is hereby given that the County Commissioners of Kershaw County, South Carolina, will receive sealed bids for the construction of a highway bridge over Wateree River. The work will be let under three separate contracts: one for the creosoted timber trestle approaches, about 2650 feet long; one for the concrete foundations, about 1000 cubic yards; and one for the steel bridge, which consists of two 30-foot spans and the taking down of and re-erecting one 130-foot span now standing on another site. Bids will be received until 3 P. M. May 22, 1917, in the County Supervisor's office in the Courthouse in the city of Camden, South Carolina.

Bidders must use the prepared forms accompanying specifications. Certified checks in the amounts shown on forms, approximating 10 per cent. of the contract price, must accompany bids. Acceptable surety bonds for approximately 50 per cent. of contract price will be required. Payment will be cash for 90 per cent. of monthly estimates. Plans and specifications may be seen at the office of the Supervisor of Kershaw County, in Camden, South Carolina, and copies may be obtained from Frink & Pinner, consulting engineers, Royster Building, Norfolk, Va., by depositing a \$5 check payable to the engineers, to be held until said plans and specifications are returned. The County reserves the right to reject any and all bids.

M. C. WEST, Supervisor,  
Kershaw County, Camden, S. C.

FRINK & PINNER,  
Consulting Engineers,  
Royster Bldg., Norfolk, Va.

Bids close June 14, 1917.

## Drainage

Sealed proposals for the excavation and clearing of a system of mains and laterals contemplated by Bayou Meto Drainage District No. 1 of Lonoke County, Arkansas, will be received and publicly read at the office of Chapline & Beard, Attorneys for the District, Lonoke, Lonoke County, Arkansas, at 12 o'clock noon on Thursday, June 14, 1917.

Bids must be accompanied by a certified check on some reputable bank for the sum of \$25,000 as evidence of good faith.

Bids will be compared and balanced on the following approximate quantities of work:  
3,046,550 cubic yards of dredge ditch.  
51,700 cubic yards of team ditch.  
550 acres of clearing.

The right is reserved to accept or reject any or all bids submitted.

Plans and specifications may be seen at the office of Chapline & Beard, Attorneys, Lonoke, Ark.

T. M. FLETCHER,  
Chairman Board of Commissioners.

Bids close June 4, 1917.

## Rock Crushing Equipment

The Fourth District Highway Commission of Pontotoc County, Miss., will receive bids on June 4 at 2 P. M. at Court House, Pontotoc, Miss., for one portable jaw rock crusher, maximum 15 tons capacity per hour, equipped with 20-foot folding elevator, 15-ton portable bin, 30"x7" screen and 75-30 oil-pull tractor, either new or second-hand.

The Commission reserves the right to reject any and all bids.

(Signed) O. J. KNOX,  
J. W. BELL,  
C. C. LOCKHART,  
Commissioners.

# INDUSTRIAL NEWS OF INTEREST

(Continued from Page 89.)

## Work Not Stopped by Fire.

Concerning the recent fire at its plant, the Walsh & Weidner Boiler Co. of Chattanooga, Tenn., manufacturer of boilers, structural steel and tanks, says that the published report of the occurrence was much exaggerated and that the flames were confined to the old boiler shop and machine shop. The new tank and structural shop, blacksmith shop, flange shop, warehouse and offices are not damaged and are running as usual. The company is now erecting over the old shop temporary sheds, and will be running full probably by the time this is published. It is intended to erect a modern brick and steel shop building on the site of the old one, but this work will not interfere with the company's operations; the work of getting out orders will go right along, the new shop being built above the temporary structures.

## Suggestions as to Slate Roofing.

E. J. Johnson of E. J. Johnson, Inc., quarrier of roof slates, 19 W. 44th St., New York City, discusses unique effects which may be produced in slate roofing, in the course of an article published in a late issue of the American Builder. After a consideration of the use of colored slates he remarks that excellent effects may be obtained by "staggering" the butts of slates, thus showing rough and uneven course lines throughout the roof. Also a "valley" in a roof may be rounded, this showing the courses of slate continuing through it, and thence onto the next section of roof, avoiding the showing of any metal, which may also be avoided by finishing hips and ridges with slate. He further says that slates can be laid random in width with good results, this breaking up uniform vertical lines shown when slates of uniform width are employed. Several other suggestions are also very valuable and timely.

## TRADE LITERATURE

### A New Machinery Monthly.

"Repairs and New Parts" is the name of a new publication of the Anderson Machine & Foundry Co., 231 North Towers Street, An-

derson, S. C., the first number of which is issued for May. The contents deal largely with products of the Anderson plant, but there is also much other entertaining and related material in its pages. There are many illustrations. It will be mailed by the company, if requested, to any machinery user, manufacturer, contractor or dealer.

## Electric Motors, Etc.

The Crocker-Wheeler Co., manufacturers of electric motors, generators and transformers, alternating and direct current, Amperes, N. J., has issued a series of bulletins relating to some of its various important products, including Slot-Bridge Construction for Induction Motors, Form I and Form L, Direct Current Machines, and Form R, Induction Motor. All of these are illustrated in a superior manner and the bulletins also embody data of value to customers and relating to ratings, etc., in addition to complete descriptions of the several inventions.

## Link-Belt Transmission Advantages.

The Link-Belt Company of Chicago, Philadelphia and Indianapolis, in a very attractive folder, tells about the advantages of the "Link-Belt silent chain, which means power transmission without slip or loss." This is described as being as flexible as a belt, positive as a gear and more efficient than either. It is claimed that it will maintain an efficiency of more than 98 per cent. under all conditions, on long or short centers; in hot, cold, damp or oily places; in intermittent or constant service. The folder is handsomely and instructively illustrated.

## Fire Protection of Tin Roofs.

"Frightful Fire Losses." By these words in large type and red ink, the Merchant & Evans Co., Philadelphia, with branches in eight cities, calls attention in a recent bulletin to the value of tin roofs because of their fireproofing qualities, and also to the safety and quality of the company's tin for use in roofing. Among the advantages of such roofs the following are mentioned: Low insurance, sanitation, low cost of maintenance, low first cost, and others. It is also said that in one year preventable fires destroyed \$32,720,000 of property; others partially preventable, \$58,148,000, and unknown (largely preventable) fires, \$62,363,000.

## Tinplate Samples Excellently Arranged.

The Merchant & Evans Company, Inc., Philadelphia, with works also at Wheeling (Warwood) and Chicago, has prepared for distribution a number of sets of samples of its high-grade roofing plate, each mounted upon a celluloid holder so that they may be hung up in convenient positions. Cards describing the quality of each sample (each piece of tin being suitably stamped to show what it is as to weight and quality) are arranged between the metal samples, and there are also additional cards referring to the company's "Almet" fire doors, fire shutters, "Star" ventilators, metal Spanish tiles, metal shingles and other products from its works. Finally there is included a list of specifications of how to lay a tin roof. These sets are being distributed to architects and engineers as well as to large buyers of sheet metal. The company says that high-grade terne plates are today made better than ever before, and that the popularity of tin roofing, after a decline, has greatly increased in the past two or three years, because of its many important advantages.

Will sell for cash  
100 tons 24 or 30-lb.

## RELAY RAILS

Write

H. C. MORRISON, Augusta, Ga.

## Wanted to Buy RELAY RAIL

200 tons, 56 or 60-pound, for cash. Also want 3000 Standard Cross Ties, seconds will answer. Write

H. C. MORRISON  
Augusta, Ga.

## Wanted to Purchase BOILER

One 40-horse-power James Beggs Directum Boiler or one 40-horse-power Erie City Economic Boiler. State price and time of delivery.

JOHN F. RILEY FOUNDRY & MACHINE WORKS  
Charleston, S. C.

# Cotton Duck

"Mt. Vernon"  
"Aretas"  
"Tellasee"

"Woodberry"  
"Greenwood's Bear"  
"Richland"

"Druid"  
"Hartford"  
"Selkirk"

## TURNER, HALSEY CO.

62 Leonard St., New York

Sales Agent for

## Mt. VERNON-WOODBERRY MILLS

Incorporated



WILLIAM PENN  
HOTEL  
PITTSBURGH, PA.

Architects:  
JANSEN & ABBOT

General Contractors:  
GEO. A. FULLER CO.

Plastering Contr's.:  
McNULTY BROS. CO.

# 20,000 Square Yards — OF — STEELCRETE — LATH —

in the William Penn Hotel, Pittsburgh. "Steelcrete" Expanded Metal Lath is used and endorsed by leading architects and engineers all over the world. "Steelcrete" is adapted to all classes of work—partitions, ceilings, overcoated houses, stucco, etc. "Steelcrete" Lath has square corners, straight edges and wide sheets. Order by name—STEELCRETE—gauge and weight per square yard.

## The Consolidated Expanded Metal Companies BRADDOCK, PA.

Our dealers throughout the U. S. carry our lath